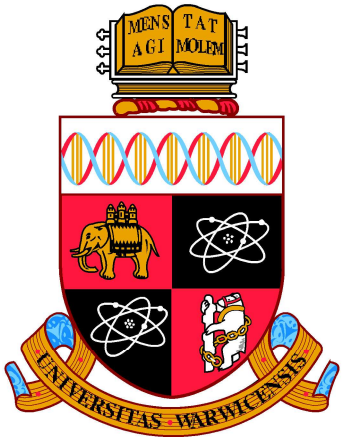

Essays on Strategy Change Announcements and the Market Impact

by

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Declaration

I declare that any material contained in this thesis has not been submitted for a degree to any other university. I further declare that I am the sole author of this thesis. Having said that, the thesis has immensely benefitted from numerous discussions that I have had with Professor Richard Taffler.

Ying Fung Hung

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Abstract

This thesis is composed of three essays on the market perception to strategy change announcements. Specifically, it tries to investigate the market reaction around the strategy change announcement date and these event firms' pre-announcement and long-term performance. It also focuses on the content analysis of FACTIVA news and analyst reports that are about the strategy changes.

Chapter Two shows that in line with the need for new strategies, firms with strategy change announcements have higher debt, less cash, worse operating performance, lower market expectations while still exhibit higher growth prospects, make higher investment and have higher R&D relative to publicly listed matched firms. This chapter also finds that strategy change announcements are associated with positive short-term abnormal returns. This suggests that market perceives the announcement as good news for the firms' long-term development. Further at one-year after the announcement date, event firms exhibit better operating performance, potential long-term growth prospects, improved liquidity and are less leveraged.

In Chapter Three, my findings show that higher occurrence of positive (negative) words in FACTIVA news are associated with more positive (negative) short-term stock performance. Furthermore, the effects of negative tones are greater relative to positive tones, especially when strategy change announcements are less informative. Increasing weights in positive (negative) tones are associated with higher (lower) abnormal returns. When comparing FACTIVA news with the subsequent annual reports, positive tones exhibit similar market reaction while negative words in annual reports tend to have higher market impact.

Chapter Four finds that higher occurrence of positive (negative) words in analyst reports exhibit more positive (negative) stock returns. In fact, the market responds more strongly to negative tones compared to positive tones in analyst reports. Increasing weights in negative words are associated with more negative stock performance. This suggests that analysts are particularly important in propagating the potential risks and challenges related to the strategy changes. Furthermore, this chapter shows that market participants pay more attention to positive tones in analyst reports when strategy change announcements are more informative or supplemented with more forward-looking statements. In contrast, market participants focus more on negative tones when firms do not disclose adequate useful information to the public. In addition, positive (negative) tones in analyst reports are associated with more positive (negative) market reaction relative to annual reports.

Chapter One
General Introduction

The thesis consists of three essays on strategy change announcements. Strategy change announcements mean that firms refine their current strategies to change their operating direction (i.e, major changes) or make different strategies that were not included in the current strategies (i.e., new strategies). The new strategies provide a new direction of firms' long-term operations. The content of strategy change announcements includes: new market that the event firms trying to expand; new approaches to compete or maintain leadership; new products or services the event firms want to launch; the reasons for collaborating with new strategic partners; new involvement with e-commerce and other firm specific strategies that introduced by the event firms. Therefore, Chapter Two investigates potential reasons for strategic changes and the short-term market reaction to strategy change announcements. Chapter Three analyse the effects of positive and negative words in FACTIVA news on stock price movement around the strategy change announcement date. Chapter Four alternatively study the impact of the content of analyst reports on stock reactions around the strategy change announcement date.

Strategy is a crucial plan for firms' long-term operation and development. It provides a sense of direction and creates a unifying vision for the whole organization. For example, a clear and explicit strategy communicates the short-term and long-term objectives to employees. Strategies also helps firms to provide superior goods and services than their competitors (Porter, 1996). However, firms are not likely to implement the same set of strategies due to the changes in business environment such as market demand, consumer tastes, competitive environment, technologies, and regulations. Firms have to anticipate and respond to these changes. Nevertheless, the literature on strategies so far has focused on the importance of a good strategic

decision and the implementation of strategies. Evidence concerning potential reasons for strategic changes and the corresponding market reaction to strategy change announcements are limited in the literature.

In Chapter Two, I focus on firms' characteristics when announcing changed/new strategies and their stock performance around the strategy change announcement date. In the aim of maximising shareholders' wealth and being competitive in the industry, managers periodically review their firms' operating performance (Johnson and Scholes, 2002; Middleton, 2003; Rumelt, 2011). If managers figure out problems in terms of poor operating performance, they may be incentivized to change their current strategies or introduce new strategies to preserve their firms' high growth potential. When announcing changed/new strategies, confident managers may disclose in details firms' new products/service and the direction and steps in terms of how to advertise their new products/service, expand in the current market or explore a new market to be competitive with their rival firms (Porter, 1996). These changed/new detailed strategies would provide positive signals to market participants and help firms to improve their performance in the long-term.

Empirically, I find that firms with strategy change announcements exhibit worse operating performance, lower market expectations, higher financial distress risk but have higher growth prospects. They are also associated with positive abnormal returns around the announcement date. It suggests that market participants consider these changed/new strategies as good signals of being competitive. In the long-term, I further find that these firms exhibit better operating performance, improved liquidity and are less leveraged. At the same time, they have high long-term growth potential and promote innovation on products and services. It indicates that after changing the current strategies or announcing a new strategy, firms are able to efficiently allocate

their resources and expand in the current/new markets by introducing new products or services.

To my best knowledge my study is the first attempt systematically to analyse the market price impact of strategy *change* announcements in detail. My second contribution describes how firms report new strategies if the market is critical of their current strategies. Firms attempt to signal change of the current inefficient "bad" strategies to "good" strategies with the purpose of increasing the firms' competitive advantages in terms of attracting more businesses, creating future investment opportunities or reducing competition.

It is easy for market participants to communicate by estimating quantitative information such as accounting variables. Nevertheless, only incorporating quantitative information alone is not enough to explain stock price movements since firms also release qualitative information to the market. Market participants in the real world tend to analyse stock price reaction using both quantitative and qualitative information. In other words, qualitative information has its irreplaceable value for market participants. The literature so far has conducted content analysis on qualitative information obtained from annual reports (Feldman，Govindraj, Livnat and Segal, 2010), news (Dougal et al., 2012), earnings conference calls (Mayew and Venkatachalam, 2012) and IPOs (Loughran and McDonald, 2013) but overlooked an important source of valuable qualitative information, strategy change announcements, which contain management's belief about the firms' future and management's intended actions to reallocate companies' resources. More interestingly, the extent of information disclosure is under the discretion of the management. The quality of the information disclosure can influence the firms' returns. Despite of its importance and relevance, there is very little empirical evidence concerning the content of strategy change announcements and its associated impact on stock returns.

Chapter Three investigates the impact of tones in FACTIVA news on stock market reactions around the strategy change announcement date. This question is triggered from different types of available public information. In addition to publicly disclosed accounting variables, qualitative information may also provide incremental powers for explaining stock prices (e.g., Loughran and McDonald, 2011; Jegadeesh and Wu, 2013). One important type of qualitative information is FACTIVA news about strategy change announcements which includes firms' new direction in short-term and long-term investments (Middleton, 2003). Furthermore, confident managers may provide detailed strategic implementation processes which represent firms' attempt to be more competitive and thus may enhance the firm value. In contrast, the less informative strategy change announcements only provide a list of new goals without further explaining the approaches to achieve them. Chapter Three tests whether confident managers actually provide more relevant (price sensitive) information.

I find using a sophisticated content analysis approach that the relative strength of the positive (negative) words used in news reports about the firms' strategy change announcements leads to more positive (negative) stock performance. The positive effects are stronger when strategy change announcements are more informative, while the negative impacts are stronger for less informative announcements. Further, increasing occurrence of positive (negative) words is associated with rising (dropping) abnormal returns. These findings suggest that market participants generally consider bad news as more credible, while good news requires more verifiable forward-looking information to support (Hutton et al., 2003). In addition, I compare tone in FACTIVA news versus that in firm annual reports and find similar effects in terms of positive weight power. Nevertheless, greater occurrence of negative words in annual reports is likely to have more negative stock reactions. One possible explanation is that firms are very likely to report positive information in their annual reports. Firms may

disclose negative information in the annual reports only when it is inevitable and thus market participants consider this negative information extra seriously.

My main contribution to the literature is to show that the content of strategy change announcements is important in explaining associated stock movements and thus extends our understanding of the importance of qualitative information to market participants. An important general contribution to the wider strategy literature I make is to highlight how firms can increase their market value by announcing new strategies (whether or not this is actually implemented in practice).

Analyst reports are a useful source of information that contains quantitative summary measures, including earnings forecasts, stock recommendation and target prices. Analyst reports also contain useful soft and non-financial qualitative information about companies' business strategies, effectiveness of their management, risk exposure and competitiveness against their peer firms (Breton and Taffler, 2001). Institutional and individual investors rely on both quantitative and qualitative information of analyst reports when making financial decisions. Tsao (2002) points out that the price targets and stock ratings (i.e., quantitative information) are the skin and bones of analysts' research, while detail and tone (i.e., qualitative information) are the meat of such reports. In reality, despite the fact that analysts' quantitative outputs are available on databases (e.g., I/B/E/S), market participants still expend vast amounts of their money in accessing the full content of analyst reports. Therefore, qualitative information is also very important to market participants. Nevertheless, the existing literature focuses almost exclusively on quantitative information and overlooks the qualitative information of the analysts' reports. The disproportion between quantitative and qualitative information studies may prevent the literature from developing a more comprehensive understanding of analysts' role (Bradshaw, 2011).

In Chapter Four, the aim is to analyse the impact of the content of analyst reports on stock price movement around the strategy change announcement date. It is triggered by different information in terms of strategy change announcements included in managers' discretionary disclosures versus analyst reports. The former one is managers' voluntary disclosure (Botosan, 1997; Hirst et al., 1999; Lang and Lundholm, 2000; Bens and Monahan, 2004) and managers may be less incentivized to include all information when they do not have detailed plan to implement their strategies. In contrast, analysts are experts and can estimate their superior firm and industry information to provide a valuable estimation of firms' performance after the announcement date. Chapter Four tests whether market participants consider information in analyst reports about strategic changes as more credible and useful for making financial decisions than that provided by firm managers.

In my parallel analysis of analyst reports I find that the greater the occurrence of positive (negative) words, the more positive (negative) is abnormal stock performance. At the same time, the impact of negative words is stronger relative to that of positive words with only the relationship between increasing weights of negative words and decreasing abnormal returns is significant. This suggests that market participants may consider negative analyst reports as more credible. In parallel, positive reports are viewed as less reliable compared to negative ones as positive news is already disclosed by firm managers. Furthermore, I show that higher occurrence of positive words in analyst reports is associated with more positive abnormal returns when strategy change announcements are more informative. In contrast, for less informative announcements, higher frequency of negative words is associated with more negative abnormal returns. In addition, this chapter shows that positive (negative) words in analyst reports have a more positive (negative) effect on stock returns relative to strategy change news and firm annual reports. This finding provides evidence to show that market participants pay more attention to credible analyst reports relative to firm

disclosures in annual reports, where the latter represents information disclosed by managers voluntarily.

My main contribution to the literature is to show that in addition to accounting variables and FACTIVA news, analyst reports are an important source in explaining stock price movements. A vital general contribution to the wider strategy literature is to highlight that analyst reports are more credible relative to FACTIVA news and firms' annual reports. My analysis also contributes to the recent empirical literature that explores the information content of qualitative information and its impact on stock market reaction (Antweiler and Frank 2004; Tetlock, 2007; Tetlock et al., 2008).

Finally, Chapter Five concludes the findings in the thesis and discusses possible future research.

Chapter Two
Market Reaction to Strategy Change Announcements

2.1. Introduction

Strategy is a crucial plan for companies' operation and development. It provides a sense of direction and creates a unifying vision for the whole organisation. For example, a clear and explicit strategy communicates the short-term and long-term objectives to employees. Strategy also helps firms to provide superior goods and services than their competitors (Porter, 1996). However, firms are not likely to implement the same set of strategies due to the changes in market environment such as market demand, consumer tastes, competitive environment, technology, and regulations. Firms have to anticipate and respond to these changes. Nevertheless, the literature on strategy so far has focused on the importance of good strategic decisions and the implementation of strategies. Evidence concerning potential reasons for changes in strategies and the corresponding market reaction to strategy change announcements are limited in the literature.

To examine companies' response to changes in business environment, this chapter aims to investigate characteristics of the firms that announce changes in their current strategies or new strategic decisions (i.e., event firms). The changed/new strategies include expansion into new markets, changes in suppliers or raw materials and development of new products or services. Further, I analyse these firms' stock performance around the strategy change announcement date.

This chapter first analyses firms' motivations to change their strategies. To maximise shareholders' wealth and be competitive in the industry, managers periodically review their firms' operating performance (Johnson and Scholes, 2002; Middleton, 2003; Rumelt, 2011). If firms do not efficiently allocate their resources, their products and services would not be competitive or attractive in the market and their managers might figure out the problems in terms of poor operating performance and financial weakness. At the same time, these firms still have high growth prospects and might increase their capital expenditures and research and development (R&D) expenses on innovating new products/services, expanding their current market shares or exploring new markets (Middleton, 2003). They might be motivated to change their strategic decisions so that new products/services are competitive and growth options are preserved. As a result, I conjecture that event firms exhibit worse operating performance but have higher growth options, capital expenditures and R&D expenses before their strategy change announcements relative to matched publicly listed firms that do not have changed/new strategies.

In this chapter, I examine a sample of 124 U.S. firms with strategy change announcements during the 2010 to 2012 period. These firms have at least one major change in their strategies during the sample period and I consider the earliest releasing date as the strategy change announcement date. My results show that before strategy change announcements, event firms have higher leverage ratio (i.e., higher financial distress risks), worse operating performance, lower market expectations but relatively higher growth prospects when compared to matched firms. Consequently, their strategy changes tend to focus on increasing the overall expenditures, especially on the research and development (R&D), to improve their product and service innovation.

Next, I explore market participants' reaction to the announcement of changed/new strategies. The announcement includes detailed description of firms' new products or

services so that firms can distinguish their products/services with their rival firms (Porter, 1996). The changed/new strategies may also provide firms the direction and steps in terms of how to advertise their new products/service, expand in the current market or explore a new market. Market participants thus can realize the potential benefits related to the changed/new strategies and I conjecture that they react positively after the announcement date. My analysis confirms the market's recognition and shows that firms with strategy change announcements have significantly positive stock performance around the strategy change announcement dates. These results are consistent with the existing literature (e.g., Bagnoli et al., 2005a; 2005b), which shows that the market is slow in absorbing strategic information.

Further, I address whether the changed/new strategies improve firms' operating performance in the long-term period. After changing the current strategies or announcing a new strategy, firms are able to efficiently allocate their resources and expand in the current/new markets by introducing new products or service. As a result, event firms are more likely to be profitable. Consistent with this conjecture, I find that firms with changed/new strategies exhibit better financial and operating performance in the long run.

My study contributes to several strands of literature. First, my analysis extends the existing empirical literature on strategy in a general level. Prior literature focuses on what is a good strategy and how to implement an effective strategy in a particular industry. Previous studies show that strategic actions and communication of strategies (e.g., CEO speeches or annual reports) affect the company reputation. Firms prefer a good reputation which helps to attract more businesses and leads to higher commercial benefits (Ferguson et al., 2000; Fombrun and Van Riel, 2004). Jones et al. (2004) find a favourable market reaction to investments that "create" future investment opportunities. Neuhierl et al. (2013) find strong market responses to news related to

corporate strategies, legal issues, customers and partners. Whittington et al. (2010) show that the market considers strategic plan announcement as more than "just talk" since the announcement can reduce competition in an industry that requires large investment or with huge sunk costs. My contribution is being the first one that analyses strategy change announcements.

My second contribution is to show that firms tend to change their strategies if current strategies do not provide efficient directions in their operations. It helps to transfer the existing inefficient "bad" strategy to a "good" strategy which can increase firms' competitive advantages in terms of attracting more businesses, creating future investment opportunities or reducing competition. After the strategy change announcement date, the market reacts positively and firms also improve their competitive advantages in the form of better operating performance.

The remainder of this chapter is organised as follows. Section 2.2 summarises the related literature. Section 2.3 explains the research questions and the economic intuition for my four main hypotheses. Section 2.4 describes the data, explains the data collection process and the methodology. Section 2.5 reports the empirical results and Section 2.6 concludes.

2.2. Literature Review

This chapter mainly focuses on firms that have changed their current strategies or made a new strategic decision. Nevertheless, current literature discusses the announcement of strategies in a general level through using a qualitative approach. Most of current papers investigate what is a (good) strategy and how to implement a

strategic decision. In this session, I provide a summary of previous studies and try to link the importance of strategic decisions with the importance of changing/new strategies.

First, Porter (1996) shows that a competitive strategy makes firms different from their rival firms. To be competitive, insight and creativity is required in terms of firms' strategic positioning. Firms can offer goods/services that are not provided by the rival companies or similar goods/services with rival firms but in different ways. In other words, firms prudently select a different set of activities to achieve product differentiation and to provide customers with a unique mix of values. This suggests that firms change their current strategies with insights and creativity when their current strategies are not competitive relative to their rival firms.

In addition to differentiating from rival firms, strategy is a long-term plan for obtaining profitability. Strategy is a statement that coherently combines all sort of actions and policies to overcome high-stakes challenges, maximise shareholders' wealth and meet the market requirement (Johnson and Scholes, 2002; Rumelt, 2011). In order to overcome the high-stake challenges, Middleton (2003) states that firms with good strategies deepen their understanding of the present situation and establish the direction and implementation steps to achieve a desired and achievable future position. If firms' current strategies have obstacles in obtaining the long-term profitability, they tend to change their strategies or make a new one. As a result, these firms can maximise shareholders' wealth, meet customers' requirement and are competitive.

Announcing changed/new strategies is a voluntarily disclosure and aims to build a competitive and profitable firm. The Voluntary disclosure indicates that firms' management voluntarily provides information to the public beyond the requirements of the SEC and GAAP (Meek et al., 1995). At the same time, disclosing the

changed/new strategic plans might reveal private information to firms' competitors. Therefore, next, I summarize benefits of the voluntarily disclosure in the form of enhancing firm value and positive market reaction. The following listed papers provide evidence to show that benefits can overweight costs.

Investors make decisions by considering the voluntary disclosed information because they connect the credibility of voluntary disclosure with firms' management credibility which suggests the level of managers' trustworthiness and competence (Molly, 2004). Investors consider firms' financial and other disclosures as more credible when the credibility of voluntary disclosure is high. The previous literature shows that combining the credible management with the informative voluntary disclosure can greatly enhance firm value. Botosan (1997), Hirst et al. (1999), Lang and Lundholm (2000) and Bens and Monahan (2004) show that the level of discretionary disclosure can be a proxy of the management credibility. High level of discretionary disclosure provides a monitoring role of firms' managers, mitigates the information asymmetry between the management and investors and thus reduces the agency costs. Furthermore, investors consider the management's subsequent disclosures as more reliable when managers present accurate disclosure and forecast at an earlier time period.

A larger amount of discretionary disclosure by firms' management is associated with a lower cost of capital and higher stock performance. When managers plan a particular strategic decision (including changing the current strategies or making a new one) and persuade stakeholders to invest, they tend to voluntarily disclose their private information about the corporate strategies (Ferreira and Rezende, 2007). The private information is reliable since managers are concerned with their reputation and credibility. This reliable voluntary disclosure is likely to exhibit a positive market reaction. The previous papers do not investigate the effect of strategy change

announcements on stock prices but they provide evidence to support the positive correlation between management's voluntary disclosure of other qualitative information and the stock market reaction. Bagnoli et al. (2005a; 2005b) analyse different corporate information events, including conference calls, press interviews, managements' disclosure of strategic decisions and future financial performance estimations. They find larger market reaction in response to the quantitative earnings guidance relative to the release of corporate qualitative information events. The market also tends to react slowly to the qualitative information relative to the quantitative information.

Neuhierl et al. (2010) analyse corporate press releases issued by U.S. publicly listed companies from 2006 to 2009 and find a strong market reaction to news related to corporate strategies, legal issues, customers and partners. In particular, they document that firms' liquidity decreases while returns' volatility increases in the month subsequent to the announcement date. During the financial crisis, news that indicates more stable and increasing future cash flows (e.g., announcements about new corporate partners, corporate restructuring, successful research completion, legal settlements and FDA approvals) is associated with more positive market reaction. Events that signal higher uncertainty and smaller future cash flows (e.g., announcements about FDA rejections, failed research efforts and legal troubles) could trigger a larger negative effect on stock prices.

Whittington et al. (2010) show that the market considers strategic plan announcements by U.S. publicly listed companies as more than "just talk" or "cheap talk". The announcement can reduce competitiveness in an industry that requires large investments or is with huge sunk costs. The announcement signals clear intentions to the firms' competitors and thus may discourage new entrants. Whittington et al. (2010) also show that new chief executive officers are more likely to enhance the impact of

positively evaluated strategic plan announcements. Discourse in the new CEOs' letters materially impact on the recommendations by financial analysts and the firms' capacity to acquire external resources.

2.3. Hypotheses

The main aim of the paper is to investigate why firms change their current strategies or announce a new strategic decision, the market's perception and the long-term operating performance to the announcements. The literature up to date mentioned in Section 2.2 focuses on the importance of strategies, including the competitive advantages, shareholder wealth maximization and management monitoring, but does not provide any direct arguments for the importance of changing/new strategies. Therefore, I provide four different hypotheses on strategy change announcements in this section.

Managers meet periodically and review firms' operating performance to maximise shareholder wealth and survive in the competitive market environment (Middleton, 2003). In the meetings, managers figure out their competitive advantages and disadvantages. To meet the market's requirement and thus be competitive, managers are eager to make sure that firms' resources, products and services are efficiently allocated (Johnson and Scholes, 2002; Rumelt, 2011). When resources are inefficiently allocated or products and services do not meet the market's requirement, firms would exhibit worse operating or/and stock performance. These firms are under the condition of uncompetitive and facing more challenges. At the same time, they still have long-term growth prospects. In order to keep the growth potential, firms' managers have intentions to make adjustments to their current strategies or make a

completely new strategy. The changed/new strategies are able to direct firms to coherently combine all sorts of actions and policies in the long-term period. Therefore, I conjecture that firms with strategy change announcements are more likely to have worse operating performance but still have growth potential. At the same time, less favourable operating performance tends to be associated with financial weaknesses, including low liquidity and high leverage. To summarise, my first hypothesis posits:

Hypothesis 1*: Firms with strategic change announcements exhibit worse operating performance, face financial weakness but have higher growth prospects.*

The changed/new strategies provide direction and steps for firms to deliver from the present uncompetitive position to their more desired future competitive position (Middleton, 2003). In addition to more investments in new projects, firms tend to increase innovations in creating new products or better services. The high innovation is important for firms to obtain their long-term future profitability. At the same time, these changed/new strategies can signal clear intentions to competitors and thus can deter new entrants, especially for the industries with huge sunk costs, such as capital investment and R&D (Whittington et al., 2010). Therefore, my second hypothesis is summarized as:

Hypothesis 2*: Event firms have higher capital expenditures and capital investment to create new products or improve their services before the strategy change announcement date.*

Firms announce to change their current strategies or provide a new strategy mean that managers have realized their problems in terms of worse operating performance and financial weakness. The changed/new strategies allow firms to provide goods/services that their rival firms do not offer or provide similar goods/services in a different manner (Porter, 1996). The main purpose is to maximize shareholders' wealth and meet the market requirement (Johnson and Scholes, 2002). Therefore, I argue that after

observing the potential benefits of the changed/new strategies, market participants are likely to perceive firms with strategy change announcements as more competitive and have positive reactions. I summarize my third hypothesis as:

Hypothesis 3*: Event firms have better stock performance around the strategy change announcement date.*

My first hypothesis stipulates that firms change their current strategies or directly provide a new strategy to efficiently allocate their resources and provide competitive products and services to their customers (Johnson and Scholes, 2002; Rumelt, 2011). Therefore, firms are able to overcome their problems in terms of financial weakness, keep their potential growth and exhibit good long-term operating performance. Also, the changed/new strategies provide firms with the direction of how to operate in the long-term. Overall, my fourth hypothesis posits that:

Hypothesis 4*: Firms have better long-term operating performance and are less leveraged after the strategy change announcement date.*

2.4. Data and Methodology

Firms could use one set of strategies for some years or change part of its current strategies or refine its current strategies to change its operating direction (i.e, major changes) or make different strategies that were not included in the current strategies and provide a new direction of firms' long-term operations (i.e., new strategies). The content of strategy change announcements includes: new market that the event firms trying to expand; new approaches to compete or maintain leadership; new products or services that the event firms plan to launch; reasons for collaborating with new

strategic partners; new involvement with e-commerce and other firm specific strategies that introduced by the event firms.

In the chapter, the sample only includes firms that made public announcements about a new strategy or major refinements in their current strategies from 1 January 2010 to 31 December 2012. The event firms are headquartered in the U.S. and are listed on the NYSE, AMEX or NASDAQ. The strategic information of firms is manually collected from FACTIVA and EDGAR by searching keywords such as "new* … strateg*", "chang* … strateg*", "modif* …strateg*", "alter* …strateg*" and "amend* … strateg*". The "*" in the keywords allows to search for the root of a word followed by one or more characters. At the same time, keywords are searched at a maximum of 5 words apart in FACTIVA. Some firms may have more than one FACTIVA news about a strategy change announcement. This chapter only includes news in the earliest date as the announcement date and removes the remaining ones. In line with the literature (e.g. Hoberg et al., 2014), I further exclude firms with SIC code in the range of 4900-4949 (utility firms) and 6000-6999 (financial institutions).

To meet these criteria, I first hand collect 358 firms with U.S. headquarters. Private firms are deleted due to unavailable information of stock prices. Public firms that have missing data are also deleted. I also exclude firms that have a plan of mergers and acquisitions in their changed/new strategic decisions. Therefore, 234 firms are deleted and the final sample size includes 124 event firms.

Next, to compare firm characteristics, firms are matched with publicly listed firms that have available accounting and stock price data in COMPUSTAT and CRSP but do not make strategy change announcements over the period from 2010 to 2012. Furthermore, event and matched firms are in the same Fama-French 12 industry and have the closest size (total assets) in the same fiscal year.

This chapter employs the conventional event study methodology by Kothari and Warner (2007). $t = 0$ denotes the event announcement date and the unexpected return is expressed as e_{it} for firm i. The difference between the raw return (R_{it}) and the expected return (K_{it}), $e_{it} = R_{it} - K_{it}$, measures the change in stockholders' wealth due to the strategy change announcement. S&P500 daily market returns from DataStream are used as the expected returns. The cross-sectional average abnormal return (AR) at date t is calculated using the following equation:

$$\mathrm{AAR}_t = \frac{1}{N}\sum_{i=1}^{N} e_{it} \tag{2.1}$$

Where AAR_t is used to test how prices respond to the strategy change announcement. To measure the market reaction over a multi-period interval, the cumulative abnormal return (CAR) from time t_1 to t_2 for firm i is calculated using the following equation:

$$\mathrm{CAR}_i(\mathrm{t}_1, \mathrm{t}_2) = \sum_{t=t_1}^{t_2} AR_{it} \tag{2.2}$$

Further, the average CAR across n firms over the time interval (t_1, t_2) is given by:

$$CAAR(\mathrm{t}_1, \mathrm{t}_2) = \frac{1}{n}\sum_{i=1}^{N} CAR_i(t_1, t_2) \tag{2.3}$$

2.5. Summary Statistics and Findings

This section includes summary statistics of 124 event firms' main characteristics at one accounting year before the strategy change announcement date and the regression results by testing the four hypotheses proposed in Section 2.3. In Tables 2.1 to 2.9, all variables are winsorised at the 1st and 99th percentile to minimize potential detrimental effect of outliers. Variable definitions are reported in Appendix 2.7.

2.5.1. Summary Statistics

Table 2.1 presents the main characteristics for the 124 event firms before the strategy change announcement date. For comparison, we also report the summary statistics for their corresponding control firms matched by industry and total assets. The most striking feature in Table 2.1 is that event firms have significantly lower current and cash ratios when compared to those of matched firms (2.176 versus 2.865 and 1.054 versus 1.454), which suggests that event firms have lower cash holdings and smaller current assets before announcing their changed/new strategies. In addition, event firms have significantly higher debt ratios (0.588 versus 0.446) and lower Z-scores (1.863 versus 3.460), which suggests that these firms are highly levered and have higher financial distress risk. Further, event firms have smaller capital expenditure relative to their total assets. There is no other economically or statistically significant difference between any other firm characteristics including total assets, EBIT to total assets, sales growth, earnings per share, price to book, research and development over total assets, change in R&D and change in capital expenditure.

- Insert Table 2.1 about here -

Overall, my findings indicate that firms with strategy change announcements exhibit lower cash holdings, have smaller current assets and capital expenditures and are highly leveraged.

2.5.2. Event Firm Characteristics

To analyse characteristics of the event firms, Tables 2.2 to 2.5 report the results of logistic regressions. The dependent variable equals to 1 for all event firms and 0 for

matched firms. All explanatory variables are estimated at one accounting year before the announcement date.

Table 2.2 shows the results of logistic regressions to test the first hypothesis. Model 1 in Panel A includes EBIT over total assets and shows that event firms have smaller EBIT. This finding suggests that firms tend to change their strategies or make a new strategy when they have lower operating performance in the past. At the same time, Panel A reports a significant positive sales growth. Even though event firms have worse performance before their strategy change announcements, they might still have potential growing prospects. To further check firms' performance, earnings per share and price to book are included in Panel B. Coefficients of earnings per share and price to book are significantly negative. This further indicates that firms tend to change their current strategies when they suffer negative operating performance and when their market value of equity is lower than their book value of equity. Smaller market value of equity suggests that the market has lower expectations for these event firms. These findings are consistent with Hypothesis 1 and suggest that event firms have worse performance but have higher growth prospects relative to their matched firms.

- Insert Table 2.2 about here -

Table 2.3 reports results of logistic regressions that demonstrate financial characteristics of event firms. Panel A shows that coefficients of both current and cash ratios are significantly negative. Firms with less cash holdings and less current assets are more likely to change their current strategies. This suggests that event firms have higher risks of experiencing liquidity problems relative to matched firms. Panel B shows that event firms have a higher debt ratio, indicating high leverage before the strategy change announcement date. To test firms' financial risk, Z-score (Altman, 1968) is included in Panel B and is significantly negative. Therefore, event firms have

higher leverage and larger financial distress risk. Findings in Table 2.3 also support Hypothesis 1 that event firms face financial weakness before their strategy change announcement dates.

- Insert Table 2.3 about here -

Table 2.4 reports results of logistic regressions to test the second hypothesis. Change in R&D and change in capital expenditure are used as proxies to measure firms' expansion or innovation. In Model 1, change in R&D is significantly positive and indicates that event firms spend higher expenditures to develop their innovation. Model 2 also reports positive and significant change in capital expenditure, indicating that event firms have increased their costs on physical assets. Model 3 includes two variables and show consistent results. Therefore, the findings are consistent with Hypothesis 2 and suggest that event firms have expanded and created product or service innovations before the strategy change announcement date.

- Insert Table 2.4 about here -

Models 1 to 3 in Table 2.5 combines all variables in Tables 2.2 to 2.4 to examine the combining effect and show consistent findings in terms of EBIT to total assets, earnings per share, debt ratio, Altman's Z-score and change in capital expenditure. Coefficient of change in R&D is marginally significant in Model 3. Coefficients are not statistically significant for price to book and cash ratio due to the high correlation with the Altman's Z-score. They become significant if excluding the Z-score in models 4 and 5. This indicates that the coefficients on price to book and cash ratio in Model 2 and 3 of Table 2.5 are weaker due to multicollinearity issues. Therefore, my findings provide evidence to support Hypotheses 1 and 2, except for the growth potential.

- Insert Table 2.5 about here -

Overall, my findings show that firms tend to have worse operating performance before the strategy change announcement date relative to their compared matched firms. They have less competitive operating performance, lower market expectations, face higher risk of financial distress but exhibit higher growth prospects.

2.5.3. Market Reaction to Strategy Change Events

To analyse the market reaction around the strategy change announcement date, Table 2.6 reports the market adjusted cumulative average abnormal returns (CAARs) of the event firms during the two trading weeks before and after the event date. Panel A shows that all CAARs within three days around the event date are significantly positive. The market expects that the changed/new strategies are beneficial for event firms and thus reacts positively. Panel B shows that most of the CAARs are significantly positive, except for the window (-10, 0). It suggests positive market reaction from one week before to two weeks after the announcement date. In line with Bagnoli et al. (2005a; 2005b), these findings indicate that the market takes longer time (i.e., ten trading days) to evaluate the qualitative information compared to the quantitative information. Panel C reports CAARs that excludes one day around the announcement date and shows that the CAARs are positive but less significant relative to Panels A and B. Majority of the abnormal returns come from the window (-1, +1). In summary, my findings in Table 2.6 are consistent with Hypothesis 3 that firms with changed/new strategies are associated with positive market reaction around the announcement date.

- Insert Table 2.6 about here -

Table 2.7 reports the market adjusted cumulative average abnormal returns of the matched firms. In line with Table 2.6, most of abnormal returns are insignificantly different from zero. Without any strategy change announcements, matched firms do not experience a positive market reaction.

- Insert Table 2.7 about here -

Tables 2.6 and 2.7 show strong difference in stock performance around the strategy change announcement date between event versus matched firms. Table 2.8 further examines the significance of difference and reports the matched firms adjusted cumulative average abnormal returns, that is, the average difference in the stock returns across event versus matched firms. Consistent with Table 2.6, Panel A shows that all CAARs within three days around the event date are positive and significant, indicating higher returns compared with matched firms. The market perceives the new strategies as a more efficient approach and thus can increase firm value. Panel B extends the event windows to ten days around the announcement date and shows similar results. Panel C shows that CAARs are positive and significant until ten days after the event date, regardless of excluding the window (0,1). CAARs are not significant from ten/five to two trading days before the announcement date. Results in Table 2.8 are also consistent with Bagnoli et al. (2005a; 2005b) and further support Hypothesis 3.

- Insert Table 2.8 about here -

In summary, this section shows that firms are associated with significantly positive abnormal returns around the announcement date. This indicates the market's good expectation of these changed/new strategies.

2.5.4 Post Event Performance

To study the long-term operating performance of event firms after the strategy change announcement date, Table 2.9 reports the results of difference in differences (DinD), the difference in performance of event firms from one accounting year before (*t-1*) to one accounting year after (*t+1*) the event date *minus* the difference in performance of matched firms over the same period. Table 2.9 shows that DinDs of annual sales growth and price to book are positive and significant and indicates that event firms have better future growth prospects and higher market expectations. DinDs of current ratio, cash ratio and Altman's Z-Score are also significantly positive and DinD of debt ratio is significantly negative, suggesting that event firms have better operating performance, are more liquid and have less financial distress risk. In addition, event firms tend to carry on expanding their products or services since one year after the announcement date: DinDs of capital expenditure over total assets and change in capital expenditure are positive and significant. Overall, Table 2.9 confirms Hypothesis 4 that event firms are likely to improve their performance after the announcement date.

- Insert Table 2.9 about here -

To summarize, these findings show that after implementing the changed/new strategies, firms tend to have better operating performance, higher market expectation and higher long-term growth options. They are also more liquid, less financially distressed and exhibit high expansion of products and services.

2.6. Conclusion

This chapter analyses the firm characteristics of event firms that announce changed/new strategies and the followed stock market reaction and long-term firm performance. U.S. headquartered firms with strategy change announcements over the period 2010-2012 are manually collected. The final sample contains 124 event firms and 124 published listed firms matched by total assets and industry.

I find that event firms have worse performance than matched firms at one accounting year before the announcement date. They have less competitive operating activities, higher financial distress risk, lower market expectations but higher growth prospects. Therefore, event firms decide to change or renew their current strategies. The chapter then shows that event firms have significantly positive stock performance around the strategy change announcement date. It suggests that the market have good expectations of implementing these strategy changes. Furthermore, event firms exhibit better operating performance and market expectation and have high long-term growth potential at one accounting year after the announcement date. Event firms also have improved liquidity and smaller financial distress risk. At the same time, they keep expanding their products and services from before to after the announcement date.

2.7 Appendix

Variable Definition

Variable	Definition	Source
AAR	The average daily abnormal returns across different firms.	CRSP; DataStream
AR	The daily difference between the raw return and the expected return (i.e., S&P500).	CRSP; DataStream
CAAR	Average abnormal returns across different firms over a period of time.	CRSP; DataStream
CAR	Cumulative abnormal returns for a firm over a period of time.	CRSP; DataStream
Cash Ratio	Cash and short-term investments over current liabilities at one accounting year before the strategy change announcement date.	COMPUSTAT
Capital Expenditure to Total Assets	Capital expenditure divided by total assets at one accounting year before the strategy change announcement date.	COMPUSTAT
Change in Capital Expenditure	Annual change in capital expenditure over the last accounting year before the strategy change announcement date in percentage.	COMPUSTAT
Change in R&D	Annual change in R&D expenditure over the last accounting year before the strategy change announcement date in percentage.	COMPUSTAT
Current Ratio	Current assets over current liabilities at one accounting year before the strategy change announcement date.	COMPUSTAT
Debt Ratio	Total liabilities over total assets at one accounting year before the announcement.	COMPUSTAT
Earnings per Share	Net income over total number of shares outstanding at one accounting year before the strategy change announcement date.	COMPUSTAT
EBIT over Total Assets	Earnings before interest and tax divided by total assets at one accounting year before the strategy change announcement date.	COMPUSTAT
Price to Book	The closing stock price divided by book value per share at one accounting year before the strategy change announcement date.	CRSP; COMPUSTAT

Variable	Definition	Source
R&D to Total Assets	R&D expenditure divided by total assets at one accounting year before the strategy change announcement date.	COMPUSTAT
Sales Growth	One-year annual growth in total sales over the last accounting year in percentage.	COMPUSTAT
Size	Natural logarithm of total assets at one accounting year before the strategy change announcement date.	COMPUSTAT
Z-Score	1.2*(Working Capital over Total Assets) + 1.4*(Retained Earnings over Total Assets) + 3.3*(EBIT over Total Assets) + 0.6*(Market Value over Book Value of Debt) + 0.999*(Total Sales over Total Assets). Based on Altman (1968).	CRSP; COMPUSTAT

Table 2.1 – Summary Statistics

This table reports the summary statistics of 124 event firms and 124 matched publicly listed firms over the period 2010-2012. Event firms are companies that announce changed/new strategies. Columns 1 and 2 (3 and 4) show the mean and standard deviation of event (matched) firms. Column 5 shows the difference in means for event versus matched firms and its significance. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimize potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date. The differences in means are tested using the t-test allowing for unequal variances. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)
	Event Firms		Matched Firms		Mean
	Mean	St.Dev.	Mean	St.Dev.	Differences
Total Assets (million USD)	5366.9	10761.9	4320.3	9601.9	1046.6
EBIT/Total Assets	0.008	0.187	0.036	0.155	-0.028
Sales Growth	0.122	0.375	0.115	0.311	0.007
Earnings per Share	0.699	2.301	1.117	1.803	-0.417
Price to Book	2.93	3.036	2.564	2.413	0.366
Current Ratio	2.176	1.452	2.865	1.956	-0.690***
Cash Ratio	1.054	1.226	1.454	1.652	-0.400**
Debt Ratio	0.588	0.269	0.446	0.223	0.141***
Z-Score	1.863	3.232	3.460	3.066	-1.596***
R&D/Total Assets	0.063	0.101	0.054	0.093	0.009
Change in R&D	0.115	0.365	0.077	0.298	0.038
Cap. Exp./Total Assets	0.607	0.217	0.701	0.163	-0.094***
Change in Cap. Exp.	0.162	0.741	0.151	0.501	0.012

Table 2.2 – Logit Analysis for Characteristics of Event Firms: Performance

This table reports the logistic results for performance of firms with strategy change announcements over the period 2010-2012. The dependent variable equals to 1 for event firms and 0 for matched firms. The dataset covers 124 event and 124 matched firms. Coefficient estimates are shown in bold. T-statistics are displayed in parenthesis. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denote significance at the 1%, 5% and 10% level respectively.

Panel A	Model 1	Model 2	Model 3
Intercept	**-0.842**	**0.080**	**-0.852**
	(-0.535)	(0.055)	(-0.529)
EBIT to Total Assets	**-2.245*** **		**-2.335*** **
	(-3.335)		(-3.127)
Sales Growth		**0.675** **	**0.106** **
		(2.307)	(2.110)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations	248	248	248
Pseudo R^2	0.049	0.026	0.060
Chi-Square	27.29	26.09	27.96

Panel B	Model 1	Model 2	Model 3
Intercept	**-1.032**	**-0.185**	**-1.034**
	(-0.747)	(-0.126)	(-0.748)
Earnings per Share	**-0.152** **		**-0.161** **
	(-2.451)		(-2.428)
Price to Book		**-0.034***	**-0.015**
		(-1.808)	(-1.400)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations	248	248	248
Pseudo R^2	0.051	0.034	0.062
Chi-Square	22.97	23.57	24.65

Table 2.3 – Logit Analysis for Characteristics of Event Firms: Financials

This table reports logistic results for financials of firms with strategy change announcements over the period 2010-2012. The dependent variable equals to 1 for event firms and 0 for matched firms. The dataset covers 124 event and 124 matched firms. Coefficient estimates are shown in bold. T-statistics are displayed in parenthesis. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denote significance at the 1%, 5% and 10% level respectively.

Panel A	Model 1	Model 2	Model 3
Intercept	**12.925*** **	**12.979*** **	**13.645*** **
	(4.050)	(3.658)	(4.096)
Current Ratio	**-0.206** **		**-0.470** **
	(-2.155)		(-2.155)
Cash Ratio		**-0.137***	**-0.319**
		(-1.818)	(-1.345)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
#Observations	248	248	248
Pseudo R^2	0.046	0.032	0.054
Chi-Square	24.37	24.81	26.03
Panel B	**Model 1**	**Model 2**	**Model 3**
Intercept	**-1.205**	**-0.367**	**-1.228**
	(-0.671)	(-0.245)	(-0.696)
Debt Ratio	**2.234*** **		**1.796** **
	(4.054)		(2.528)
Z-Score		**-0.129*** **	**-0.131** **
		(-3.331)	(-2.268)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations	248	248	248
Pseudo R^2	0.071	0.072	0.090
Chi-Square	25.28	26.57	28.03

Table 2.4 – Logit Analysis for Characteristics of Event Firms: Innovation

This table reports the logistic results for innovation of firms with strategy change announcements over the period 2010-2012. The dependent variable equals to 1 for event firms and 0 for matched firms. The dataset covers 124 event and 124 matched firms. Coefficient estimates are shown in bold. T-statistics are displayed in parenthesis. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denote significance at the 1%, 5% and 10% level respectively.

	Model 1	Model 2	Model 3
Intercept	**-0.465**	**-0.064**	**-0.721**
	(-0.314)	(-0.044)	(-0.471)
Change in R&D	**3.333****		**3.876*****
	(2.558)		(2.834)
Change in Capital Expenditure		**0.053*****	**0.063*****
		(3.331)	(3.703)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations	248	248	248
Pseudo R^2	0.039	0.033	0.061
Chi-Square	23.28	22.77	23.76

Table 2.5 – Logit Analysis for Event Firms Characteristics: Combining Effect

This table reports the logistic results for firms with strategy change announcements over the period 2010-2012. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. They are estimated at one accounting year before the announcement date. All variables in Tables 2.2 to 2.4 are included in this table. Coefficient estimates are shown in bold. T-statistics are displayed in parenthesis. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denote significance at the 1%, 5% and 10%, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	**11.343*** **	**13.876*** **	**10.695*** **	**15.281*** **	**13.054*** **
	(4.095)	(3.602)	(3.713)	(4.640)	(3.568)
EBIT to Total Assets	**-1.797***		**-1.376**		**-1.520***
	(-1.897)		(-1.049)		(-1.793)
Sales Growth		**0.011**	**0.111**	**0.041**	**0.053**
		(0.170)	(1.103)	(0.399)	(0.351)
Earnings per Share	**-0.141****		**-0.153****		**-0.168****
	(-2.359)		(-2.304)		(-1.973)
Price to Book		**0.013**	**0.035**	**-0.052***	**-0.049***
		(0.481)	(1.122)	(-1.809)	(-1.733)
Current Ratio	**-0.081**		**-0.089**		**-0.258**
	(-0.795)		(-0.403)		(-0.836)
Cash Ratio		**-0.088**	**-0.265**	**-0.312***	**-0.284***
		(-0.811)	(-1.034)	(-1.892)	(-1.756)
Debt Ratio	**2.159*** **		**2.031****		**2.254*** **
	(2.770)		(2.498)		(3.241)
Z-Score		**-0.117*** **	**-0.016**		
		(-2.830)	(-0.450)		
Change in R&D	**2.347**		**4.200**		**2.922**
	(1.254)		(1.623)		(1.591)
Change in Cap. Exp.		**0.046*** **	**0.078****	**0.859*** **	**0.713****
		(2.774)	(2.253)	(2.764)	(2.147)
Year Fixed Effects	YES	YES	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES	YES
# Observations	248	248	248	248	248
Pseudo R^2	0.156	0.094	0.169	0.083	0.164
Chi-Square	30.59	31.78	33.40	29.53	32.26

Table 2.6 – Short Term Cumulative Average Abnormal Returns of Event Firms

This table shows the results for cumulative average abnormal returns (CAARs) for the event firms around the strategy change announcement date. Event firms are companies that have strategy change announcements over the period 2010-2012. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. Panel A shows the results for event firms within 3 days around the announcement date. Panel B shows the results for 5 and 10 trading days, which is equivalent to 1 and 2 trading weeks. Panel C shows the CAARs from 5 or 10 trading days to 2 trading days before the announcement date. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Panel A	(-1,0)	(0,1)	(-1,1)	(-3,0)	(0,3)	(-3,3)
CAAR	1.38%***	0.97%**	1.59%***	1.37%**	2.08%***	2.69%***
Std. Dev.	0.053	0.050	0.060	0.070	0.070	0.085
# Observations	124	124	124	124	124	124
T-statistics	2.819	2.131	2.908	2.136	3.236	3.472
P-value	0.006	0.035	0.004	0.035	0.002	0.001

Panel B	(-5,0)	(0,5)	(-5,5)	(-10,0)	(0,10)	(-10,10)
CAAR	1.61%**	2.55%***	3.40%***	1.48%	2.71%***	3.43%**
Std. Dev.	0.08	0.087	0.104	0.118	0.104	0.157
# Observations	124	124	124	124	124	124
T-statistics	2.214	3.194	3.561	1.367	2.851	2.382
P-value	0.029	0.002	0.001	0.174	0.005	0.019

Panel C	(-5,-2)	(2,5)	(-10,-2)	(2,10)
CAAR	0.24%	1.58%**	0.10%	1.74%*
Std. Dev.	0.069	0.081	0.105	0.101
# Observations	124	124	124	124
T-statistics	0.377	2.139	0.105	1.917
P-value	0.707	0.034	0.916	0.058

Table 2.7 – Short Term Cumulative Average Abnormal Returns of Matched Firms

This table shows the results for cumulative average abnormal returns (CAARs) for the matched firms. Matched firms are firms that have similar size and are in the same industry with event firms while do not have strategy change announcements during the sample period 2010-2012. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. Panel A shows the results for event firms within 3 days around the announcement date. Panel B shows the results for 5 and 10 trading days, which is equivalent to 1 and 2 trading weeks. Panel C shows the CAAR from 5 or 10 trading days to 2 trading days before the announcement date. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Panel A	(-1,0)	(0,1)	(-1,1)	(-3,0)	(0,3)	(-3,3)
CAAR	0.01%	-0.05%	0.13%	-0.19%	-0.07%	-0.09%
Standard Deviation	0.04	0.035	0.045	0.057	0.06	0.069
# Observations	124	124	124	124	124	124
T-statistics	0.028	-0.159	0.317	-0.360	-0.136	-0.144
P-value	0.978	0.874	0.752	0.719	0.892	0.886

Panel B	(-5,0)	(0,5)	(-5,5)	(-10,0)	(0,10)	(-10,10)
CAAR	-0.09%	-0.90%	-0.83%	-0.41%	-1.49%	-1.72%
Standard Deviation	0.064	0.09	0.103	0.116	0.112	0.126
# Observations	124	124	124	124	124	124
T-statistics	-0.162	-1.100	-0.879	-0.385	-1.442	-1.498
P-value	0.872	0.274	0.381	0.701	0.152	0.137

Panel C	(-5,-2)	(2,5)	(-10,-2)	(2,10)
CAAR	-0.11%	-0.85%	-0.42%	-1.43%
Standard Deviation	0.039	0.061	0.081	0.088
# Observations	124	124	124	124
T-statistics	-0.298	-1.521	-0.569	-1.781
P-value	0.767	0.131	0.571	0.077

Table 2.8 – Short Term CAARs: Event versus Matched Firms

This table shows the difference between the cumulative average abnormal returns (CAARs) of event and matched firms. Event firms are companies that that have strategy change announcements during the sample period 2010-2012. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. Panel A shows the results for event firms within 3 days around the announcement date. Panel B shows the results for 5 and 10 trading days, which are equivalent to 1 and 2 trading weeks. Panel C shows the CAARs from 5 or 10 trading days to 2 trading days before the announcement date. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Panel A	(-1,0)	(0,1)	(-1,1)	(-3,0)	(0,3)	(-3,3)
CAAR	1.37%***	1.02%**	1.46%***	1.55%**	2.16%**	2.78%***
Standard Deviation	0.055	0.048	0.054	0.070	0.097	0.104
# Observations	124	124	124	124	124	124
T-statistics	2.728	2.296	2.927	2.423	2.432	2.906
P-value	0.007	0.023	0.004	0.017	0.017	0.004

Panel B	(-5,0)	(0,5)	(-5,5)	(-10,0)	(0,10)	(-10,10)
CAAR	1.71%**	3.45%***	4.23%***	1.89%**	4.19%***	5.15%***
Standard Deviation	0.085	0.130	0.142	0.086	0.161	0.18
# Observations	124	124	124	124	124	124
T-statistics	2.183	2.893	3.243	2.407	2.841	3.119
P-value	0.031	0.005	0.002	0.018	0.005	0.002

Panel C	(-5,-2)	(2,5)	(-10,-2)	(2,10)
CAAR	0.34%	2.43%**	0.52%	3.17%**
Standard Deviation	0.075	0.118	0.069	0.153
# Observations	124	124	124	124
T-statistics	0.496	2.246	0.826	2.260
P-value	0.621	0.027	0.410	0.026

Table 2.9 – Post-Event Analysis: Difference in Differences for Event and Matched Firms

This table compares the summary statistics of event and matched firm between the pre- and the post-event period. The sample consists of 124 event firms and 124 matched firms. Event firms are companies that have strategy change announcements during the sample period 2010-2012. All variables are defined in Appendix 2.7 and winsorised at the 1st and 99th percentile to minimise potential detrimental effect of outliers. DinD denotes difference in differences, which is the difference in performance of event firms from one accounting year before (*t-1*) to one accounting year after (*t+1*) the announcement date minus the difference in performance of matched firms over the same periods. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

	Event Firms				Matched Firms				DinD
	Post-Event (1)		Pre-Event (2)		Post-Event (3)		Pre-Event (4)		(1-2) -
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	(3-4)
EBIT/Total Assets	0.025	0.237	0.008	0.187	0.016	0.212	0.036	0.155	0.037
Sales Growth	0.174	0.21	0.122	0.375	0.06	0.19	0.115	0.311	0.107***
Earnings per Share	0.707	1.827	0.699	2.301	1.063	1.781	1.117	1.803	0.061
Price to Book	3.365	2.411	2.93	3.036	2.488	2.279	2.564	2.413	0.511*
Current Ratio	2.257	1.128	2.176	1.452	2.544	1.665	2.865	1.956	0.403**
Cash Ratio	1.129	0.839	1.054	1.226	1.062	1.152	1.454	1.652	0.466***
Debt Ratio	0.566	0.261	0.588	0.269	0.478	0.215	0.446	0.223	-0.053**
Z-Score	2.129	4.392	1.863	3.232	2.611	3.535	3.460	3.066	1.115***
R&D/Total Assets	0.075	0.106	0.063	0.101	0.051	0.094	0.054	0.093	0.014
Change in R&D	0.059	0.277	0.115	0.365	0.076	0.24	0.077	0.298	-0.055**
Cap. Exp./Total Assets	0.633	0.177	0.607	0.217	0.666	0.167	0.701	0.163	0.06**
Change in Cap. Exp.	0.163	0.301	0.162	0.741	0.010	0.275	0.151	0.501	0.142***
Total Assets (million USD)	6355	16433	5367	10762	4708	12369	4320	9602	601

Chapter Three
The Information Content of Strategy Change Announcements

3.1. Introduction

It is easy for market participants to communicate by estimating quantitative information including accounting variables. Nevertheless, only incorporating quantitative information alone is not enough to explain stock price movement since firms also release qualitative information to the market. Market participants tend to analyse stock price reaction using both quantitative and qualitative information. In other words, qualitative information has its irreplaceable value for market participants. The literature so far has conducted content analysis on qualitative information obtained from annual reports (Feldman, Govindraj, Livnat and Segal, 2010), news (Dougal et al., 2012), earnings conference calls (Mayew and Venkatachalam, 2012) and IPOs (Loughran and McDonald, 2013) but overlooked an important source of valuable qualitative information, strategy change announcements, which contain management's belief about firms' future and management's intended actions to reallocate companies' resources. More interestingly, the extent of information disclosure is under the discretion of the management. The quality of the information disclosure can influence firms' return. Despite of its importance and relevance, there is very little empirical evidence concerning the content of strategy change announcements and its associated impact on stock returns.

In this chapter, I study the impact of positive and negative words in FACTIVA news on stock price movement around the strategy change announcement date. Further, I compare tones in more informative strategy change announcements relative to less

informative ones and compare FACTIVA news versus annual reports to find out the source of announcements.

First, this chapter investigates the effect of tones in FACTIVA news on stock performance after strategy change announcements. In addition to publicly disclosed accounting variables and analysts' forecasts, qualitative information may also provide incremental power for explaining stock prices (e.g., Loughran and McDonald, 2011; Jegadeesh and Wu, 2013). One important type of qualitative information is FACTIVA news about the strategy change announcement which includes firms' new direction in short-term and long-term investment (Middleton, 2003). The information about strategy change announcement is privately owned by the firms and the managers can optionally disclose it, as preparing the unique set of private information is time costing and requires lots of effort. Credible managers may option to voluntarily release the information and signal the market that this discretional disclosure is valuable for their firms' long-term development in addition to the available quantitative information (Molly, 2004; Bens and Monahan, 2004). Therefore, I conjecture that tones in FACTIVA news about the strategy change announcement are very likely to exhibit incremental explanatory power for stock returns after the announcement date.

This chapter includes 562 FACTIVA news of 133 strategy change announcements over the period from 2010 to 2015. Strategy change announcements mean that firms refine their current strategies to change their operating direction (i.e, major changes) or make different strategies that were not included in the current strategies (i.e., new strategies). The new strategies provide a new direction of firms' long-term operations. I find that both positive and negative weight powers have incremental power for explaining the market stock reaction in addition to accounting variables. That is, higher occurrence of positive (negative) words are associated with more positive (negative) stock returns. I find consistent but a bit weaker results for both positive and

negative words when using the annual report dates rather than the FACTIVA news dates and using the Harvard Psychosociological Dictionary H4N rather than the Loughran and McDonald (2011) lexicon word list.

Further, I explore the informativeness of strategy change announcements and investigate its effect on the market reaction. More informative announcements include detailed strategic implementation processes which represent firms' attempt to change into more competitive strategies and thus may enhance firm value. It can further mitigate the information asymmetry between managers and investors and figure out private signals included in the available quantitative accounting variables (Botosan, 1997; Hirst et al., 1999; Lang and Lundholm, 2000; Bens and Monhan, 2004). In contrast, less informative strategy change announcements are oversimplified and list only a new set of goals, without much justifications. Therefore, I conjecture that more informative strategy change announcements have more predicting powers in explaining stock returns. My findings confirm the difference and further show that higher occurrence in positive (negative) words is associated with more positive (negative) stock returns when the announcement is more (less) informative. It suggests that market participants consider bad words as more credible while need verifiable forward-looking information to support good words (Hutton et al., 2003).

Findings in terms of more versus less informative strategy change announcements are re-emanated after regressing change in CAR [0, 3] on change in positive or/and negative weight powers over different time periods. I find that changes in positive (negative) weight power is associated with increasing (decreasing) abnormal returns.

Next, I compare the content of FACTIVA news versus annual reports. Annual reports are released later and may contain the words describing the changed/new strategies. I find that positive words in these two sources of information have similar positive

impact on stock prices. Nevertheless, higher weights of negative words in annual reports are associated with more negative abnormal returns. Market participants seriously consider the negative information as firms include negative words in their annual reports when it is inevitable.

My main contribution to the literature is to show that contents of strategy change announcements are important in explaining the stock returns. Stock returns are more positive (negative) when weights of positive (negative) words are higher. Furthermore, the effects of positive (negative) words are stronger for more (less) informative strategy announcements. A vital general contribution to the wider strategy literature is to highlight that firms can enhance their firm value by changing the old uncompetitive strategies.

My analysis also contributes to the recent empirical literature that explores the qualitative information and their impact on the stock prices (Antweiler and Frank 2004; Tetlock, 2007; Tetlock et al., 2008). Antweiler and Frank (2004) show that message board positing exhibits positive stock returns. Tetlock (2007) finds that media pessimism has negative effect on market prices. Tetlock et al. (2008) focus on the words in financial news stories and show that negative words are associated with small one-day delayed negative returns. My analysis extends the importance of qualitative information by investigating the strategy change announcement.

Furthermore, my findings confirm that the Loughran and McDonald (2011) word list is better for content analysis compared with the Harvard Psychosociological Dictionary since it excludes the non-positive and non-negative words (e.g., capital, board, cost, liability, tax, foreign). I find that positive (negative) words have more positive (negative) effects on stock returns. My analysis also extends the measurement approach in Jegadeesh and Wu (2013) and provides a further evidence to show that

assigning different term weights to different words is more crucial in checking the market effect of the qualitative information relative to a complete set of word list. Future research on qualitative information should consider firms' strategic announcements and use more appropriate textual analysis.

The remainder of this chapter is organised as follows. Section 3.2 summarises the related literature. Section 3.3 explains the research questions and economic intuition for my two main hypotheses. Section 3.4 introduces the sample data, explains the coding process and the methodology. Section 3.5 provides basic summary statistics of control variables and shows the regression results and robustness check, Section 3.6 concludes.

3.2. Literature Review

In this section, I summarise recent studies that investigate the effect of qualitative information on stock prices. I also show how to use a quantitative method to analyse qualitative information.

Antweiler and Frank (2004) investigate the impact of the "soft talk" information that is obtained from internet message boards, including "Yahoo! Finance" and "Raging Bull", on the market price reaction. They show that message board posting is associated with positive stock prices followed by a price reversal. They also find that a greater disagreement in terms of message board posting exhibits a smaller next day stock trading volume. These findings provide evidence to show that "soft talk" is not noisy information. Tetlock (2007) conducts a similar analysis on the content of media

reports, “Abreast of the Market” in the Wall Street Journal, over the period from 1984 to 1999. He finds that high level of media pessimism is likely to have a downward pressure on the market prices, which is followed by a reversion to the prices’ fundamental value. It suggests that the content of media reports provide additional information rather than incorporating new information about the stocks’ fundamental value. He further shows that unusually low or high value of media pessimism is associated with a high market trading volume. In addition, he suggests using the measurement of media content as a proxy for non-informational trading or investor sentiment.

Tetlock et al. (2008) extend the analysis of Tetlock (2007) and examine the effect of negative words in Dow Jones News Services and Wall Street Journal Stories (i.e., the language in financial news stories) on S&P500 firms from 1980-2004. They use standardized fraction of negative words and show that beyond historical accounting data and analysts’ forecasting, negative words in the financial news of earnings tend to have a small one-day delayed negative market reaction. It means that linguistic variables can incrementally explain the movement of stock prices and future earnings when the traditional accounting and analyst data might not. They further compare negative words included in different stories and find consistent results.

Most content analyses require word classifications. Before Loughran and McDonald (2011), studies commonly use the Harvard Psychosociological Dictionary (i.e., the Harvard-IV-4 TagNeg (H4N) file) as the source for word classifications. However, the content analysis using the Harvard list is biased since it contains words (e.g., capital, board, cost, liability, tax, foreign and etc.) which are normally neither positive nor negative in financial contexts. Loughran and McDonald (2011) develop an alternative more accurate word list that excludes these non-positive and non-negative words. They show that the new world list can better explain the relationship between

contemporaneous 10-K filings (or unexpected earnings) and the subsequent stock returns (or the trading volume) relative to the old one. That is, positive words exhibit a stronger impact on stock returns or trading volume and the effect of negative words become significant.

Building on Loughran and McDonald (2011) word list, Jegadeesh and Wu (2013) propose a new method to assess the qualitative information by allowing different weightings to different words rather than assigning the same weighting for all words commonly used in previous studies. They find that both positive and negative words in 10-K filings have incremental explanatory powers in terms of market prices in addition to the general explanatory words (e.g., size, book to market and etc.). They further claim that a proper choice of term weighting is more important relative to an accurate and complete set of word list.

3.3. Hypotheses

In this section I propose that contents of strategy change announcements affect stock returns. Therefore, I provide two different hypotheses.

Investors rely on three main sources of information, including analysts' forecasts, publicly disclosed accounting variables and linguistic descriptions of firms' current performance and future predictions. Large amount of studies conducts analyses on the market reaction by testing the effect of accounting variables (e.g., Fama and French, 1993) and analysts' reports (e.g., Asquith et al., 2005). The literature on the effect of linguistic information is very limited and relatively new (e.g., Loughran and McDonald, 2011; Jegadeesh and Wu, 2013). These studies provide evidence to show

that linguistic information has an additional impact on the stock price movement and suggest that only using the accounting and analyst variables might not be enough. FACTIVA news about the strategy change announcement is a type of linguistic description and provides information about the new direction of firms' future investment (Middleton, 2003). At the same time, corporate managers spend lots of time and effort on preparing the valuable private information and voluntarily release the news to the public. This voluntary disclosure reflects the credibility of firms' managers and thus can provide incremental information in addition to the available quantitative information (Molly, 2004; Bens and Monahan, 2004). Alternatively, if the quantitative information contains all information needed by the market, the qualitative information provided by the FACTIVA news is likely to be irrelevant for explaining the stock prices. Therefore, my first hypothesis is summarized as:

Hypothesis 1*: Tones of strategy change announcements are likely to have incremental explanatory power for firms' stock returns.*

The FACTIVA news about the strategy change announcement can be more or less informative. The level of informativeness represents firms' attempt to show investors their sufficient effort in delivering a credible change in their strategies. The more informative FACTIVA news is able to provide market participants with new information in terms of the detailed strategic implementation steps. It also can confirm their private signals contained in the available quantitative information and thus might mitigate the information asymmetry between firms' management and investors (Botosan, 1997; Hirst et al., 1999; Lang and Lundholm, 2000; Bens and Monhan, 2004). The less informative news may only list down a new set of goals but do not provide with the corresponding implementation processes. Therefore, the informativeness of strategy change announcements provides the market with insights regarding the firm value. I argue that more informative disclosure of strategy change

announcement is associated with more positive explanatory power in terms of stock returns. In short, the hypothesis is formatted as:

Hypothesis 2*: Tones of more informative strategy announcements are likely to be associated with more pronounced firm stock price movements.*

3.4. Data and Methodology

This section describes the data and methodology for testing the effect of strategy change announcements on stock returns. First, I introduce the process of collecting firms that have strategy change announcements. Strategy change announcements mean that firms refine their current strategies to change their operational direction (i.e, major changes) or announce different strategies that were not part of their original strategies (i.e., new strategies). New strategies aim to provide a new direction for, and a repositioning of, firms' long-term operations. More specifically, the content of strategy change announcements includes: new markets that event firms try to expand into; new approaches to compete or maintain leadership; new products or services that event firms plan to launch; reasons for collaborating with new strategic partners; new involvement with e-commerce and other firm specific strategies introduced by event firms.

In this chapter, my sample only includes firms that made public announcement about a new strategy or major changes in their current strategies from 1 January 2010 to 31 December 2015. The event firms are headquartered in the U.S. and listed on the NYSE, AMEX or NASDAQ. The strategic information of firms is manually collected from FACTIVA and EDGAR by searching keywords such as "new* … strateg*", "chang* … strateg*", "modif* …strateg*", "alter* …strateg*" and "amend* …

strateg*". "new* … strateg*" indicate new strategies while "chang* … strateg*", "modif* …strateg*", "alter* …strateg*" or "amend* … strateg*" indicate updating firms' current strategies. Also, the "*" in the keywords allows to search for the root of a word followed by one or more characters. Additionally, keywords are searched at a maximum of 5 words apart in FACTIVA.

Some firms may have more than one FACTIVA news in terms of strategy change announcements. For each single announcement, this chapter only includes news in the earliest announcement date when the event firms announce their strategy change news at the first time and the remaining ones are removed. Using the initial public announcement date can mitigate the effects of other concurrent information and thus might obtain a "cleaner effect" of strategy change announcements on stock prices movement. At the same time, FACTIVA news at the initial strategy change announcement date delivers the most important message. In addition, to obtain rich details from the strategy change announcement, FACTIVA news that contains less than 100 words are excluded from my sample.

Furthermore, I require each firm to have at least 2 strategy change announcements over different years. The latter announcement date of the 2 strategy strategic changes is defined as the event date and the former date is denoted as the estimation date. In line with the literature (e.g. Hoberg et al., 2014), I further exclude firms with SIC code in the range of 4900-4949 (utility firms) and 6000-6999 (financial institutions). Private firms are deleted due to the unavailable information of stock prices. Public firms that have missing data are also deleted. I also exclude firms that have mergers and acquisitions in their strategy events. The final sample size includes 562 FACTIVA reports of 133 event firms.

In addition, the methodology is introduced. This chapter aims to conduct a content analysis on the tones of strategy change announcements. Previous literature classifies a list of positive and negative words and shows that the market reaction is associated with the relative proportion of positive or negative words to total words in documents (Tetlock, 2007; Tetlock et al., 2008; Feldman et al, 2010; Loughran and McDonald, 2011). Nevertheless, these papers assume that all words in the positive (negative) word list have an equal positive (negative) impact. This indicates that the word "good" has the same positive impact with the word "best". Similarly, the word "bad" has the same negative impact with the word "worst". The equal effect among words is not consistent with the reality.

In order to avoid potential biases from assigning wrong weighting to the positive and negative words, this chapter takes the approach proposed by Jegadeesh and Wu (2013). Specifically, for each document, Jegadeesh and Wu (2013) define a score which is positively correlated with the occurrence of each positive or negative word. This score is also positively correlated with the strength of each positive or negative word and inversely related to the total words in the document. Jegadeesh and Wu (2013) score for a document *i* is formally presented as:

$$\text{Score}_i = \sum_{\text{j=1}}^{\text{J}} (w_j F_{i,j}) \frac{1}{a_i} \tag{3.1}$$

Where w_j denotes the weight for word j, $F_{i,j}$ denotes the number of occurrences of word j in the document i. $1/a_i$ captures the effect that the score has a negative relationship with the total words in the document.

Following Jegadeesh and Wu's (2013) approach, the document score is correlated with the stock returns of companies that publicly release their strategy change announcements. The purpose is to measure the extent of information that the tone of

the strategy change announcement can convey to the market. The relationship can be shown as:

$$\mathrm{r}_i = a + b\left(\sum_{\mathrm{j}=1}^{\mathrm{J}}\left(w_j F_{i,j}\right)\frac{1}{a_i}\right) + \varepsilon_i$$
$$= a + \left(\sum_{\mathrm{j}=1}^{\mathrm{J}}\left(bw_j F_{i,j}\right)\frac{1}{a_i}\right) + \varepsilon_i \qquad (3.2)$$

Where r_i denotes the abnormal return when the i^{th} strategy change announcement is released. In the equation, $F_{i,j}$ and a_i can be calculated directly. However, the weighting, bw_i, associated with each word is estimated by using the following regression equation:

$$\mathrm{r}_i = a + \left(\sum_{\mathrm{j}=1}^{\mathrm{J}}\left(B_j F_{i,j}\right)\frac{1}{a_i}\right) + \varepsilon_i \qquad (3.3)$$

Where B_j denotes the regression coefficients and provides an estimate for bw_j. At this stage, b and w_j cannot be estimated separately because the weighting measures the strength of each word in the lexicon. Nevertheless, the weights can be scaled arbitrarily. Jegadeesh and Wu (2013) standardise the estimates of B_j's to provide an estimate of the weight of each word in the lexicon:

$$\widehat{\mathrm{w}}_j = \frac{\widehat{\mathrm{B}}_j - \bar{B}}{Standard\ Deviation\left(\widehat{\mathrm{B}}_j\right)} \qquad (3.4)$$

Where $\widehat{\mathrm{w}}_{\mathrm{j}}$ denotes the estimate for w_{j}, $\widehat{\mathrm{B}}_j$ denotes the slope coefficient estimated from the Regression (3.3), $\bar{B}$ denotes the mean of all $\widehat{\mathrm{B}}_j$.

Importantly, I first estimate the $\widehat{\mathrm{w}}_j$ by using words included in FACTIVA news and abnormal returns around the strategy change announcement date during the estimation window. Then $\widehat{\mathrm{w}}_j$ is applied to estimate the score of analyst reports during the event window by using the Equation (3.1).

Next, this chapter examines the impact of the score on stock returns by using the following regression:

$$r_i = a + b\left(\sum_{j=1}^{J}(\widehat{w}_j F_{i,j})\frac{1}{a_i}\right) + \varepsilon_i \qquad (3.5)$$

In the first stage regression using the Equation (3.2), stock returns are regressed on the occurrence of positive (negative) words in FACTIVA news during the estimation windows. If the occurrence of positive (negative) words is associated with positive (negative) stock returns, the positive (negative) weight power is very likely to have a positive (negative) coefficient and have positive (negative) standardized weight $\widehat{w}_j$. In the second stage using the Equation (3.5), stock returns are regressed on the positive (negative) word weight power that is estimated by using Equations (3.4) and (3.1) during the event window. If the occurrence of positive (negative) words is associated with the stock returns, the positive (negative) weight power is more likely to have a positive coefficient. In other words, the occurrence of positive (negative) words in FACTIVA news has incremental predicting power on stock returns.

Therefore, the null hypothesis in Equation (3.5) is that *b* is equal to zero and indicates that the tone measurement for the strategy change announcement does not convey any incremental information to the market. The alternative hypothesis is that *b* is statistically greater than zero, suggesting that the tone measurement provides incremental information to market participants.

3.5. Summary Statistics and Findings

This section reports summary statistics of 133 event firms' main characteristics at one accounting year before their strategy change announcement dates and the regression results to test my main hypotheses in Section 3.3. In Tables 3.1 to 3.9, all variables are

winsorised at the 1st and 99th percentile to minimize potential detrimental effect of outliers. Variable definitions are reported in Appendix 3.7. Tables 3.2 to 3.9 also include size, book to market of equity, volatility, turnover, accruals and momentum factor, as control variables (Jegadeesh and Wu, 2003).

According to Jegadeesh and Wu (2013), risky firms tend to state potential consequences for the risk that they take compared to safe firms. Likewise, firms with recent poor performance are very likely to explain the reasons for such performance. As a result, tones of news can be affected by different firm-specific factors. This chapter includes firm-specific factors such as size, book to market, volatility, turnover and accruals. Size and volatility measure the risk of firms. Riskier firms tend to have more negative tone. Book to market ratio indicates growth or value firms. Growth firms tend to be more cautious with the information they disclose to the public. Turnover measures whether a particular stock is attractive to investors. Accruals represent changes in working capital. This may be caused by bad business conditions or earning manipulation. Momentum is a proxy for recent industry stock performance and thus is also included.

3.5.1. Summary Statistics

Table 3.1 reports the main characteristics for the 133 event firms prior to the strategy change announcement date. Mean and median of market value of equity are 4.31 billion USD and 1.78 billion USD respectively. The standard deviation is 5.38 billion USD, indicating that some firms might have a big size. Mean (0.436) and median (0.343) of book to market ratio are smaller than 1, suggesting the potential growth prospects for strategy changing firms in my sample. Volatility shows that the average change of stock returns is 8.60% over the last 60 months before the announcement date. Mean and median are 0.653 and 0.934 for turnover and are 0.094 and 0.062 for

accruals, respectively. Table 3.1 also includes momentum since it is important for impacting stock returns. Momentum is a monthly data downloaded from Kenneth R. French Data Library and is matched with the event month. Mean and median of momentum are 0.002 and 0.001, respectively. It indicates that industry stock prices of event firms keep increasing before the announcement date.

- Insert Table 3.1 about here -

3.5.2. Tones in FACTIVA News

Tables 3.2 to 3.6 show the regression results of positive and negative weight powers on stock prices. The dependent variable is the market adjusted cumulative abnormal returns over a 4-day period after the announcement date (i.e., CAR [0, 3]) (Loughran and McDonald, 2011; Jegadeesh and Wu, 2013). Year fixed effects and Fama-French 12 industry effects are also included, but the coefficient estimates are not reported to preserve space.

Table 3.2 reports that coefficients of positive and negative weight powers are positive and significant at the 5% level. It suggests that higher occurrence of positive (negative) words exhibit more positive (negative) stock returns. Higher book to market ratio and lower accruals are associated with higher stock returns. This finding confirms Hypothesis 1 that positive and negative words in the FACTIVA news have incremental explanatory power for stock returns around the strategy change announcement date.

- Insert Table 3.2 about here -

Next, I include two examples to introduce the process of classifying the "more" and "less" informative strategy change announcements, explain the two corresponding sub-sample sizes and investigate different effects of positive and negative words in FACTIVA news.

It is under managers' discretion whether the disclosed strategy change announcements are more informative or less informative. The informative discretionary disclosure is found to be associated with lower cost of capital, better stock performance and smaller information asymmetry (Botosan, 1997; Lang and Lundholm, 2000; Bens and Monahan, 2004 and Ferreira and Rezende, 2007). As a result, when managers plan to encourage investments in a particular strategic direction, they are likely to reveal the private information on their corporate strategies.

First, more informative announcements include detailed processes to implement changed/new strategies. For example, people separately used smartphones and laptops before 2010, thus Apple Inc. announced a new strategy about developing a new mobile device that sit between smartphone and laptop. People are able to use the new mobile device to browse websites, display electronic books and play games. In 2010, Apple Inc. introduced an electronic tablet called "IPad" and believes that it is more capable than a smart phone and at the same time more intimate than a laptop. Reuters News (2010) conducted an online poll to more than 1,000 respondents. Nearly 30% of respondents had no interest in IPad, 37% of respondents were willing to buy IPad for 500 to 699 USD and 20% would pay 700 to 899 USD. On the releasing date, the sale price of IPAD was announced to be 499 USD. Apple Inc estimated to sell up to 4 million IPads in the first year and expected to generate sales of more than 4 billion USD in 2011 (Dow Jones Institutional News, 2010). The news about Apple Inc's new strategy includes a detailed description of the appearance and capacity of IPad and summarizes the market research of the price that consumers are willing to pay for

before releasing. It also includes an estimation of annual sales of IPad after announcing the price. It further provides information about the profitability of Apple iPad's 3G services cooperated with its partner AT&T Inc. Therefore, I rate the strategy change announcement of Apple Inc as 10/10 for the highest level of informative disclosures and classify Apple Inc. and other similar firms as event firms with “more informative” strategy change announcements.

Less informative announcements may only state their strategies in terms of goals that they wish to achieve without a detailed description of the implementation steps. For example, Financial News (2012) shows that Tower Watson planned to adjust their strategies in an economy where the scarcity was an increasingly common phenomenon. Tower Watson also mentioned some targets including providing growth, introducing new technologies and hedging against future inflation. Nevertheless, the company did not include detailed implementation steps in the news. Therefore, I rate the strategy change announcement of Tower Watson as 3/10 for the low level of informative disclosures and classify this firm and other similar firms as event firms with “less informative” strategy change announcement.

Second for the two sub-samples, each event may have more than one FACTIVA news report. To investigate the effect of informativeness on stock performance, I combine different reports of one announcement into one news item and then divide the 133 news items into “more or less informative” strategy change announcements. The first method depends on the median grade of informativeness of the 133 news and thus I divide the full sample into two halves. News of 67 firms are classified as more informative strategy change announcements and the remaining 66 are classified as less informative announcements. The second method depends on the quality of the information. A strategy change announcement is considered as more (less) informative when the news is rated from 6 to 10 (1 to 5).

Table 3.3 reports the results after including the informative announcement dummy. In Column 2, the dummy is defined using the first classification method, which equals to one for more informative strategy change announcements and zero otherwise. Column 2 shows that the coefficient of the informative announcement dummy is significantly positive. It suggests that more informative strategy change announcements are associated with better subsequent stock performance. In Column 3, the informative announcement dummy is classified depending on the quality of information. Consistently, coefficient of the informative announcement dummy is positive and significant at the 5% significance level.

- Insert Table 3.3 about here -

Table 3.3 above shows that more versus less informative strategy change announcements have different impacts on the stock prices. To improve objectivity, I use the first classification method (i.e., based on the median informativeness) to divide the 133 combined FACTIVA news. I then count the original number of FACTIVA news for the 67 more informative and the 66 less informative strategy change announcements. Finally, more (less) informative firms have 335 (277) original news that are analysed in Table 3.4 (Table 3.5).

Model 1 in Table 3.4 shows that the coefficient of the positive weight power is positive and significant at the 5% level. In model 2, the coefficient of the negative weight power is also positive but only significant at the 10% level. These findings suggest that the predicating power of positive words tends to be stronger relative to negative words. More informative strategy change announcements are able to provide the market with additional information to make better evaluation and thus enhance the predicting power of positive words. They include detailed processes to implement

their strategies and specific steps to achieve their goals. Model 3 shows consistent results.

- Insert Table 3.4 about here -

Columns 1 and 3 in Table 3.5 report insignificant coefficients for the positive weight power. It suggests that the less informative strategy change announcements tend to provide with less verifiable forward-looking disclosures. Coefficients of the negative weight power in Columns 2 and 3, however, are positive and significant (at the 5-percent level). This suggests that higher occurrence of negative words in less strategy change announcements are associated more negative stock returns. As firms merely list their goals without telling the market detailed implementation approaches, the market might be very reluctant to fully trust their promised positive things. In contrast, rational investors in the market are risk averse and thus tend to more thoroughly evaluate the potential risks for the firms when negative words are included in the news.

- Insert Table 3.5 about here -

In summary, in line with Hutton et al. (2003), Tables 3.2 to 3.5 suggest that bad news is more credible but good news have to be supplemented with verifiable forward-looking disclosures. These findings also confirm my second hypothesis that more informative strategy change announcements are associated with more pronounced market movement. Further, the tones of positive words have more positive market reaction for firms with more informative strategy change announcements. The negative words in less informative strategy change announcements are associated with more negative market price movement.

Additionally, firms that have strategy change announcements at one year are more likely to have different news at last year (e.g., sales growth, charity, lawsuits and layoffs). To differentiate the effect of strategy change announcements versus other news, I examine the impact of change in tones of FACTIVA news over different years.

Table 3.6 examines the change in tone of FACTIVA news between time *t* with strategy change announcements and time *t-1* without strategy change announcements by using the following regression:

$$\Delta r_i = a + \beta \times \Delta Score_i + b \times Size_i + c \times BM_i + d \times Volatility_i + e \times Turnover_i + f \times EADRet_i + g \times Accruals_i \quad (3.6)$$

Note that the score in the Equation (3.6) is estimated using the one-stage regression. That is, I estimate the weightings for $score_t$ and $score_{t-1}$ by using the estimation steps from Equations (3.2) to (3.4) and then calculate the two scores by using the Equation (3.1).

Table 3.6 reports results of regressing change in CAR [0, 3] on change in positive or/and negative weight powers. I use change in CAR [0, 3] rather than CAR [0, 3] as the dependant variable to eliminate the time effect of last FACTIVA news on stock prices. In other words, change in CAR [0, 3] captures the adjusted abnormal stock price movement over different time periods. Coefficients of change in positive weight power are positive and significant (at the 10-percent level) only in model 3, indicating that 1-unit increase in the positive score would generate 2.50 units higher abnormal returns, assuming all other factors remain constant (the positive score is small than 1 and the unit of change in CAR [0, 3] is in percentage, therefore, it is reasonable and equivalent to show that 1% increase in the positive score is associated with 2.5% increase in stock returns). Coefficients of change in negative weight power are positive and significant (at the 10-percent level in model 2 and at the 5-percent level in model

3), indicating that 1% increase in the score (i.e., negative score is less negative) exhibits 2.65% higher abnormal returns, assuming all other factors remain constant.

- Insert Table 3.6 about here -

In summary, this section shows that higher occurrence of influential positive (negative) words lead to more positive (negative) abnormal returns. Furthermore, positive words are associated with more positive returns when strategy change announcements are more informative. In contrast, negative words tend to exhibit more negative returns for less informative announcements. In line with Hutton et al. (2003), these findings suggest that people may consider bad news as credible while require verifiable forward-looking information to support good news.

3.5.3. Tones in FACTIVA News versus Annual Reports

FACTIVA news discloses information about the strategy change announcement to the public for the first time. Annual reports come later but with more detailed information. To investigate whether market participants react more strongly to the initial announcement versus more detailed information, this section compares the effects of FACTIVA news against annual reports and figures out possible additional effects of more detailed annual reports afterwards. The event dates for the 562 FACTIVA news refer to the initial public announcement dates in FACTIVA. The event dates for the 133 annual reports are the firms' fiscal year ending dates which are exactly after the corresponding initial FACTIVA news dates.

In line with results in Table 3.2, Model 1 in Table 3.7 shows that higher occurrence of positive words in FACTIVA news reports are associated with more positive stock returns. Relative to the news, positive words in annual reports have similar positive

effect on stock prices: coefficient of the interaction term 'Positive Weight Power * Annual Report Dummy' is positive but not significant. The total effect ('Positive Weight Power' + 'Positive Weight Power * Annual Report Dummy') is positive and significant. This suggests that market participants have similar reaction to positive words in news and annual reports which are released later. The market considers that annual reports can provide some additional information about the changed/new strategies.

- Insert Table 3.7 about here -

Model 2 reports the effects of negative words and shows that coefficients of the negative score and interaction term ('Negative Weight Power * Annual Report Dummy') are positive and significant. In line with Table 3.2, higher occurrence of negative words in the news exhibits more negative stock returns. Further, negative words in the annual reports have stronger effect relative to the news. This suggests that market participants extra seriously consider the bad information in annual reports and have larger reaction to negative words. Model 3 combines both positive and negative weight powers and shows consistent findings.

Overall, I find that positive words in FACTIVA news and annual reports are associated with similar positive stock reactions while higher occurrence of negative words in annual reports tend to have more negative returns relative to FACTIVA news. It might be because that managers are less incentivised to include negative information in annual reports and they include these negative words when it is inevitable, which are considered by the market as extra seriously. These findings further confirm Hypothesis 1 that positive and negative tones in FACTIVA news have incremental power for explaining the stock performance.

3.5.4. Robustness Check

Tables 3.2 to 3.6 use the dates of strategy change announcements firstly reported by FACTIVA news as the event dates. In order to investigate whether positive and negative weight powers still have predicting power after using different event dates, this section conducts a robust check by changing the FACTIVA initial announcement dates to annual report dates. Then I use the annual reports to get positive and negative weight powers. Table 3.8 shows that coefficients of both positive and negative weight powers are positive and significant, indicating incremental explanatory powers. Therefore, my findings in Table 3.2 are robust to different event dates.

- Insert Table 3.8 about here -

Tables 3.2 to 3.8 report regression results when using the Loughran and McDonald (2011) lexicon to get the positive and negative weight powers. To have a robustness check, I use the Harvard Psychosociological Dictionary H4N world list rather than the Loughran and McDonald (2011) lexicon to calculate positive and negative weight powers and report the results in Table 3.9. In line with findings in Table 3.2, coefficients of positive and negative weight powers are both positive and significant (at the 10-percent level). When comparing results using the Harvard-IV-4 TagNeg (H4N) versus the Loughran and McDonald (2011) word lists, I find that the latter provides stronger results. One reason is that the Loughran and McDonald (2011) word list contains more appropriate positive and negative words to measure the financial content relative to the Harvard-IV-4 TagNeg (H4N) world list. Loughran and McDonald (2011) develop the alternative word list and prove that they can better reflect the tone in financial contents. They remove words like capital, board, cost and liability from the Harvard word list, as these words are neither positive nor negative in terms of financial contents.

- Insert Table 3.9 about here -

Overall, my findings in Table 3.2 are robust by changing initial releasing dates of FACTIVA news into annual report dates and by using the Harvard-IV-4 TagNeg word list to replace the Loughran and McDonald (2011) lexicon.

3.6. Conclusion

This chapter uses the approach proposed by Jegadeesh and Wu (2013) to analyse the impact of positive and negative words in strategy change announcements on stock prices for 133 firms from 2010 to 2015. Overall, the findings show that both positive and negative words have incremental explanatory power on stock returns and higher occurrence of influential positive (negative) words tends to exhibit more positive (negative) stock reaction. The results are robust after changing the FACTIVA news dates to the annual report dates and changing the Loughran and McDonald (2011) lexicon to the Harvard Psychosociological Dictionary H4N word list.

Further, the effects of positive and negative words are different depending on the informativeness (i.e., more versus less informative) of strategy change announcements. Higher occurrence of positive words is associated with more positive stock returns when strategy change announcements are more informative while higher weights of negative words tend to have more negative stock performance for less informative announcements. These findings are consistent with Hutton et al. (2003) and suggest that bad news is more likely to be credible while good news need to be supplemented with verifiable forward-looking disclosures. In addition, I find that

increasing occurrence of positive (negative) words are associated with rising (dropping) abnormal returns over different time periods.

The chapter also investigates the different sources of strategy change announcements and shows that market participants have similar reaction to the positive tone of FACTIVA news relative to annual reports. Nevertheless, the negative tone of annual reports is associated with more incremental explanatory power (i.e., more negative stock returns) relative FACTIVA news. One possible explanation is that firms are more likely to report positive information in their annual reports. Firms may disclose negative information in the annual reports when it is inevitable and thus market participants consider this negative information as extra seriously.

3.7 Appendix

Variable Definition

Variable	Definition	Source
Accruals	One-year change in current assets excluding cash minus change in current liabilities excluding long-term debt in current liabilities and taxes payable minus depreciation divided by average total assets. Based on Jegadeesh and Wu (2013).	COMPUSTAT; CRSP
Annual Report Dummy	Dummy variable equal to 1 for annual reports and 0 for strategy change announcement news.	Hand Collection
AR	The daily difference between the raw return and the expected return (i.e., S&P500).	CRSP; DataStream
Book to Market	Book value of equity over the market capitalization at one accounting year before the strategy change announcement date.	COMPUSTAT; CRSP
CAR	Cumulative abnormal returns for a firm over a period of time.	CRSP; DataStream
Change in Negative Weight Power	The difference in negative weight power of FACIVA news for event firms with strategy change announcements versus without announcements at 1 year ago.	CRSP; Hand Collection
Change in Positive Weight Power	The difference in positive weight power of FACIVA news for event firms with strategy change announcements versus without announcements at 1 year ago.	CRSP; Hand Collection
Informative Announcement	Dummy variable equals to 1 if event firms provide detailed information about strategy change announcements and 0 otherwise.	Hand Collection
Momentum	The difference between the monthly average return of the two high prior return portfolios and the monthly average return of the two low prior return portfolios. It is denoted as, Momentum = 1/2*(Small High + Big High) – 1/2*(Small Low + Big Low). Based on Kenneth R. French - Data Library.	Kenneth R. French - Data Library

Variable	Definition	Source
Size	Natural logarithm of the market value of equity (i.e., stock price times the total number of shares outstanding) at one accounting year before the strategy change announcement date.	COMPUSTAT; CRSP
Turnover	The natural logarithm of the number of shares trading during the period from 6 to 252 trading days before the strategy change announcement date divided by the number of shares outstanding on the filing date. Based on Jegadeesh and Wu (2013).	CRSP
Volatility	The standard deviation of the firm-specific component of returns that are estimated using up to 60 months of data. Based on Jegadeesh and Wu (2013).	CRSP

Table 3.1 - Summary Statistics

This table reports the summary statistics of my sample over the period 2010-2015. The sample consists of 562 FACTIVA news from 133 event firms. Event firms are companies that have strategy change announcements. Columns 1, 2 and 3 show the mean, standard deviation and median of event firms, respectively. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimize potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date.

	(1)	(2)	(3)
	Mean	Standard Deviation	Median
Market Value (million USD)	4307.2	5382.6	1777.3
Size	7.550	1.616	7.482
Book to Market	0.436	0.381	0.343
Momentum	0.002	0.024	0.001
Volatility	0.086	0.089	0.071
Turnover	0.653	0.934	0.592
Accruals	0.094	0.171	0.062

Table 3.2 – Effect of Strategy Change Announcement on Stock Returns
This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 562 FACTIVA news from 133 event firms. Event firms are companies that have strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.013**	**0.014**	**0.018**
	(1.046)	(0.866)	(1.388)
Positive Weight Power	**1.160****		**1.783****
	(2.210)		(2.460)
Negative Weight Power		**1.410****	**3.978****
		(2.061)	(2.036)
Control Variables			
Size	**-0.0005**	**-0.0008**	**-0.0004**
	(-0.755)	(-0.980)	(-0.641)
Book to Market	**0.026****	**0.032****	**0.027****
	(2.337)	(2.457)	(2.467)
Momentum	**-0.023**	**-0.045**	**-0.082**
	(-0.205)	(-0.346)	(-0.746)
Volatility	**-1.006**	**-0.862**	**-0.985**
	(-1.411)	(-1.040)	(-1.323)
Turnover	**0.006**	**0.004**	**0.005**
	(1.584)	(0.860)	(1.324)
Accruals	**-0.128***	**-0.141***	**-0.061**
	(-1.892)	(-1.870)	(-0.901)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Observations (News Articles)	562	562	562
R^2	0.093	0.117	0.146
F	2.578	2.371	2.712

Table 3.3 – The Informativeness of Strategy Change Announcements

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 562 FACTIVA news from 133 event firms. Event firms are companies that have strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Based on the Median	Based on the Quality of Information
Constant	**-0.021*** **	**-0.020*** **
	(-5.804)	(-6.687)
Informative Announcement	**0.031***	**0.030****
	(1.866)	(2.271)
Control Variables		
Size	**-0.0005**	**-0.0002**
	(-0.007)	(-0.161)
Book to Market	**0.020*** **	**0.018*** **
	(4.357)	(4.778)
Momentum	**-0.085**	**-0.075**
	(-1.548)	(-1.561)
Volatility	**0.104**	**0.042**
	(0.519)	(0.256)
Turnover	**-0.001**	**-0.0001**
	(-0.643)	(-0.094)
Accruals	**-0.111*** **	**-0.118*** **
	(-2.994)	(-3.799)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
# Observations (News Articles)	562	562
R^2	0.145	0.150
F	2.900	2.930

Table 3.4 – More Informative Strategy Change Announcements

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 335 FACTIVA news from 67 more informative event firms with strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.001**	**-0.002**	**-0.003**
	(-0.095)	(-0.104)	(-0.249)
Positive Weight Power	**0.829*** **		**1.401*** **
	(2.687)		(3.759)
Negative Weight Power		**2.851***	**4.955*** **
		(1.846)	(3.885)
Control Variables			
Size	**0.0006**	**-0.0002**	**-0.0003**
	(0.958)	(-0.266)	(-0.007)
Book to Market	**0.022** **	**0.038*** **	**0.031*** **
	(1.983)	(3.634)	(4.173)
Momentum	**-0.137**	**-0.386**	**-0.260**
	(-0.500)	(-1.587)	(-1.492)
Volatility	**0.697**	**1.507** **	**1.556** **
	(0.858)	(1.964)	(2.367)
Turnover	**-0.0000**	**-0.011** **	**-0.009** **
	(-0.007)	(-2.140)	(-2.536)
Accruals	**-0.045**	**-0.046**	**0.072**
	(-0.947)	(-0.071)	(1.392)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Observations (News Articles)	335	335	335
R^2	0.108	0.101	0.167
F	2.850	2.560	2.960

Table 3.5 – Less Informative Strategy Change Announcements

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 227 FACTIVA news from 66 less informative event firms with strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.010***	**0.017*****	**0.018*****
	(1.900)	(3.584)	(4.030)
Positive Weight Power	**0.161**		**1.107**
	(0.081)		(0.586)
Negative Weight Power		**3.423****	**3.616****
		(2.444)	(2.553)
Control Variables			
Size	**-0.0008****	**-0.0007****	**0.0006****
	(-2.387)	(-2.307)	(-1.986)
Book to Market	**-0.002**	**-0.007**	**-0.007**
	(-0.366)	(-1.470)	(-1.468)
Momentum	**-0.231*****	**-0.355*****	**0.372*****
	(-4.523)	(-5.374)	(-5.327)
Volatility	**-1.391*****	**-1.532*****	**1.562*****
	(-4.723)	(-5.865)	(-6.208)
Turnover	**0.003*****	**0.005*****	**0.005*****
	(2.655)	(4.016)	(4.082)
Accruals	**-0.264*****	**-0.258*****	**0.256*****
	(-3.399)	(-3.541)	(-3.552)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Observations (News Articles)	227	227	227
R^2	0.112	0.120	0.120
F	2.250	2.210	2.740

Table 3.6 – Change in Tones of FACTIVA Reports

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 133 event firms. Event firms are companies that have strategy change announcements. The dependent variable is the difference between CAR [0, 3] and the CAR over the same period but at one year ago. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: Change in CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.008**	**0.004**	**0.019**
	(-0.566)	(0.284)	(1.133)
Change in Positive Score	**0.602**		**2.501***
	(0.636)		(1.930)
Change in Negative Score		**2.429***	**2.645****
		(1.789)	(2.515)
Control Variables			
Size	**-0.0001**	**-0.0003**	**-0.0004**
	(-0.062)	(-0.205)	(-0.276)
Book to Market	**-0.005**	**0.003**	**0.008**
	(-0.237)	(0.133)	(0.356)
Momentum	**0.174**	**-0.006**	**-0.042**
	(0.643)	(-0.022)	(-0.141)
Volatility	**-0.405**	**-0.567**	**-0.884**
	(-0.435)	(-0.609)	(-0.931)
Turnover	**-0.006**	**-0.007**	**-0.007**
	(-0.686)	(-0.820)	(-0.773)
Accruals	**-0.192**	**-0.177**	**-0.093**
	(-1.144)	(-1.077)	(-0.579)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Observations (New Articles)	133	133	133
R^2	0.098	0.113	0.140
F	2.170	2.430	2.870

Table 3.7 – Annual Reports versus FACTIVA News

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 562 FACTIVA news and 133 annual reports. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.007**	**0.002**	**0.001**
	(-1.586)	(0.270)	(0.245)
Positive Weight Power	**2.053*** **		**2.295*** **
	(4.655)		(5.589)
Negative Weight Power		**3.524** **	**4.719*** **
		(2.451)	(3.994)
Annual Report Dummy	**0.004**	**0.001**	**0.004**
	(0.762)	(0.194)	(0.754)
Positive Weight Power*	**0.598**		**-1.481**
Annual Report Dummy	(0.484)		(-1.602)
Negative Weight Power*		**4.558*** **	**5.462*** **
Annual Report Dummy		(2.986)	(4.228)
Control Variables			
Size	**-0.0001**	**-0.0005**	**-0.0003**
	(-0.269)	(-0.892)	(-0.657)
Book to Market	**0.004**	**0.010**	**0.006**
	(0.655)	(1.647)	(1.048)
Momentum	**-0.237***	**-0.325*** **	**-0.377*** **
	(-1.848)	(-2.599)	(-3.000)
Volatility	**0.414***	**0.381***	**0.334**
	(1.707)	(1.675)	(1.618)
Turnover	**0.001**	**0.001**	**0.001**
	(0.602)	(0.310)	(0.456)
Accruals	**0.003**	**-0.031**	**-0.025**
	(0.047)	(-0.537)	(-0.466)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Total Observations	695	695	695
R^2	0.134	0.164	0.197
F	3.146	3.241	4.984

Table 3.8 – Annual Report Filing Period Abnormal Returns

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The sample consists of 133 event firms. Event firms are companies that have strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorised at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.015*** **	**0.017*** **	**0.020*** **
	(4.291)	(4.714)	(5.070)
Positive Weight Power	**0.499*** **		**0.814*** **
	(2.679)		(4.236)
Negative Weight Power		**1.581** **	**2.684*** **
		(1.985)	(3.046)
Control Variables			
Size	**-0.001*** **	**-0.001*** **	**-0.001*** **
	(-3.571)	(-3.708)	(-3.759)
Book to Market	**-0.032*** **	**-0.028*** **	**0.027*** **
	(-6.027)	(-5.958)	(-5.580)
Momentum	**0.097**	**0.046**	**0.065**
	(1.400)	(0.675)	(0.952)
Volatility	**0.099**	**0.066**	**-0.020**
	(0.494)	(0.375)	(-0.108)
Turnover	**0.0001**	**-0.001**	**-0.001**
	(0.003)	(-0.618)	(-0.685)
Accruals	**0.179*** **	**0.183*** **	**0.212*** **
	(3.773)	(4.012)	(5.187)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
#Observations (Annual Reports)	133	133	133
R^2	0.129	0.119	0.152
F	2.895	2.778	3.285

Table 3.9 – Effect of Strategy Change Announcements on Stock Returns: Different Word Lists

This table reports the regression results of my sample over the period 2010-2015 using the Harvard Psychosociological Dictionary H4N lexicon. The sample consists of 562 FACTIVA news from 133 event firms. Event firms are companies that have strategy change announcements. The dependent variable is CAR [0, 3]. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 3.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.009*** **	**-0.005**	**0.001**
	(-2.994)	(-1.235)	(0.384)
Positive Weight Power	**1.503***		**1.098***
	(1.910)		(1.831)
Negative Weight Power		**1.616***	**1.275***
		(1.954)	(1.794)
Control Variables			
Size	**-0.0005**	**-0.0006**	**-0.0006**
	(-1.189)	(-1.420)	(-1.421)
Book to Market	**0.027*** **	**0.030*** **	**0.029*** **
	(5.496)	(5.041)	(5.800)
Momentum	**0.031**	**0.178**	**-0.005**
	(0.746)	(0.835)	(-0.023)
Volatility	**0.194**	**0.002**	**0.002**
	(0.978)	(1.138)	(1.170)
Turnover	**0.004***	**-0.160*** **	**-0.085** **
	(1.816)	(-4.093)	(-2.354)
Accruals	**-0.157*** **	**-0.069**	**-0.065**
	(-3.732)	(-1.170)	(-1.394)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
# Observations (News Articles)	562	562	562
R^2	0.089	0.094	0.131
F	2.784	3.430	3.982

Chapter Four
Change in Firm Strategies, Analyst Response and Market Reactions

4.1. Introduction

Analyst reports are a useful source of information that contains quantitative summary measures, including earnings forecasts, stock recommendation and target prices. Analyst reports also contain useful soft and non-financial qualitative information about companies' business strategies, effectiveness of their management, risk exposure and competitiveness against their peer firms (Breton and Taffler, 2001). Institutional and individual investors rely on both quantitative and qualitative information of analyst reports when making financial decisions. Tsao (2002) points out that target prices and stock ratings (i.e., quantitative information) are the skin and bones of analysts' research, while details and tone (i.e., qualitative information) are the meat of such reports.

In reality, despite the fact that analysts' quantitative outputs are available on databases (e.g., I/B/E/S), market participants still expend vast amounts of their money in accessing the full content of analyst reports. Therefore, qualitative information is also very important to market participants. Nevertheless, the existing literature focuses almost exclusively on quantitative information and overlooks the qualitative information of the analysts' reports. The disproportion between quantitative and qualitative information studies may prevent the literature from developing a more comprehensive understanding of analysts' role (Bradshaw, 2011). The aim of the chapter is to analyse the impact of the content of analyst reports on stock price movement around the strategy change announcement date.

First, this chapter investigates the impact of tones in analyst reports on stock returns after the strategy change announcement date. It is triggered by different information in terms of strategy change announcement included in managers' discretionary disclosures versus analyst reports. The former one is managers' voluntary disclosure (Botosan, 1997; Hirst et al., 1999; Lang and Lundholm, 2000; Bens and Monahan, 2004) and managers may be less incentivized to include all information when they do not have detailed plan to implement their strategies. In contrast, analysts are more knowledgeable the event firms and industry specific information to provide a valuable estimation of firms' performance after the announcement date. Market participants thus consider information in analyst reports as supplementary, necessary and more credible. As a result, I conjecture that tones in analyst reports are associated with incremental power for explaining stock returns.

This chapter includes 721 analyst reports of 133 strategy change announcements over the period from 2010 to 2015. Strategy change announcements mean that firms make major changes in their current strategies and direction or introduce different strategies that were not included in their current strategies (i.e., new strategies). The new strategies provide a new direction of firms' long-term operations. I find that both positive and negative weight powers have incremental explanatory power for abnormal returns in addition to accounting variables. In other words, higher occurrence of influential positive (negative) words leads more positive (negative) stock returns. The results are consistent but weaker when changing the Harvard Psychosociological Dictionary H4N word list into the Loughran and McDonald (2011) lexicon. The former one includes words that are neither positive nor negative in financial contexts (e.g., capital, board, cost, liability, tax, foreign) and thus can weaken the impacts of positive and negative words.

Next, this chapter focuses on the effect of positive and negative words in analyst reports on stock performance. Managers prefer to including good words but avoid containing negative words in their announcements and thus analysts are important in telling the "bad truth" (Hong, Lim, and Stein, 2000; Miller, 2002; Kothari, Shu, and Wysocki, 2009). Therefore, market participants may consider negative words in analyst reports as more credible and have strong negative reactions. In contrast, they assume positive words as less reliable because they have already received positive information from the managers. My findings confirm that negative words in analyst reports tend to cause stronger negative effects on stock returns compared with positive impacts by positive words.

Furthermore, I analyse whether tones in analyst reports of more informative strategy change announcements have similar effects relative to less informative ones. More informative announcements generally include detailed implementation process (e.g., anticipated prices, customers and sales) of the changed/new strategies. Therefore, analyst reports are able to provide credible positive estimation which is associated with stronger positive market reaction. Alternatively, announcements are less informative because managers may hide or delay some bad information (Kothari et al., 2009). I conjecture that if negative words are included in analyst reports, market participants consider them as more credible and are more likely to have stronger negative reactions. Our results show that higher occurrence of positive words in analyst reports exhibits more positive abnormal returns when strategy change announcements are more informative. In contrast, for less informative announcements, higher frequency of negative words is associated with more negative abnormal returns.

Findings in terms of more versus less informative strategy change announcements are confirmed after regressing change in CAR [0, 3] on change in positive or/and negative weight powers over different time periods. I find that change in positive weight power

is not associated with change in abnormal returns. In contrast, higher presence of influential negative words leads to decreasing stock returns. This further suggests that market participants pay more attention to negative words included in analyst reports.

The last question compares the tones in analyst reports relative to annual reports. Information in terms of strategy change announcements is voluntarily disclosed in annual reports and thus might be less informative. Differently, analysts are more skilful and may provide more information. Therefore, the market may consider analyst reports rather than annual reports as more credible and tend to have stronger reactions. My results confirm that higher occurrence of influential positive (negative) words in analyst reports exhibits more positive (negative) abnormal returns after the strategy change announcement date.

My main contribution to the literature is to show that in addition to accounting variables and FACTIVA news, analyst reports are an important source of explaining the stock price movement. Frequency of positive (negative) words are associated with more positive (negative) stock performance. Furthermore, positive words in analyst reports exhibit stronger positive impacts when announcements are more informative and negative words have more negative impacts for less informative announcements. A vital general contribution to the wider strategy literature is to highlight that analyst reports are more credible relative to FACTIVA news and annual reports.

My analysis also contributes to the recent empirical literature that explores the qualitative information and their impact on the stock reaction (Antweiler and Frank 2004; Tetlock, 2007; Tetlock et al., 2008). Antweiler and Frank (2004) show that message board positing is likely to exhibit positive stock returns. Tetlock (2007) finds that media pessimism has negative effect on market prices. Tetlock et al. (2008) focus on the words in financial news stories and show that negative words are associated

with a small one-day delayed negative returns. My analysis extends the importance of qualitative information by investigating tones in analyst reports in terms of strategy change announcements.

Furthermore, my findings confirm that the Loughran and McDonald (2011) word list is better for content analysis compared with the Harvard Psychosociological Dictionary since it excludes the non-positive and non-negative words (e.g., capital, board, cost, liability, tax, foreign). I find that higher presence of influential positive (negative) words leads to more positive (negative) effects on stock returns. My analysis also extends the measurement approach in Jegadeesh and Wu (2013) and provides further evidence to show that assigning different term weights to different words is more crucial in checking the market effect of qualitative information relative to a complete set of the word list.

The remainder of this chapter is organised as follows. Section 4.2 summarises the related literature. Section 4.3 explains the research questions and economic intuition for my four main hypotheses. Section 4.4 introduces the sample data, explains the data collection process and the methodology. Section 4.5 provides basic summary statistics of control variables and shows the regression results and robustness check, Section 4.6 concludes.

4.2. Literature Review

This section summarizes recent studies that analyse the impact of qualitative information, including analyst reports, on the market price reaction.

The first group of studies investigate the outside qualitative information which excludes analyst reports. Antweiler and Frank (2004) find that internet message boards, which is a type of "soft talk" information and includes "Yahoo! Finance" and "Raging Bull", exhibit positive stock returns followed by a price reversal. Further, a greater disagreement about message board posting is associated with smaller next day trading volume. Antweiler and Frank (2004) indicate that "soft talk" is valuable for market participants and thus not noisy information. Tetlock (2007) focuses on media reports in terms of "Abreast of the Market" in the Wall Street Journal from 1984 to 1999 and shows that high level of media pessimism tends to have decreasing stock prices. The price drop is reserved to the fundamental value subsequently. These findings prove that instead of incorporating new information, media reports can incremental explain firms' fundamental value. He further finds that unusually low or high value of media pessimism is likely to have a high stock trading volume. Tetlock et al. (2008) extend the analysis of Tetlock (2007) and investigate the price movement of S&P500 firms from 1980 to 2004 depending on negative words in Dow Jones News Services and Wall Street Journal Stories (i.e., the language in financial news stories). They show that after excluding the effects of historical accounting information and analysts' forecasts, standardized faction of negative words in earning news is associated with a small one-day delayed negative market reaction. Therefore, they prove that qualitative information may provide incremental information for stock price reaction in addition to traditional accounting variables and analyst information.

Second, I summarize research on inside qualitative information. Feldman et al. (2010) show that management discussion and analysis in 10-K filings are significantly correlated with contemporaneous stock returns. Further, Loughran and McDonald (2011) argue that the commonly used Harvard Psychosociological Dictionary (i.e., the Harvard-IV-4 TagNeg (H4N) file) is biased in content analysis as it includes words like capital, board, cost, liability, tax, foreign which are normally neither positive nor

negative in a financial context. They develop an alternative more accurate word list that excludes these non-positive and non-negative words. Compared with the old word list, positive words in 10-K filings (or unexpected earnings) are associated with stronger positive stock returns or trading volume and negative words tend to have significant impact. Therefore, they provide evidence to show that the new word list can better explain the relationship between qualitative information and the subsequent stock performance. In addition, Jegadeesh and Wu (2013) propose a new method to analyse the qualitative information. They assign different weights to different words rather than the same weight for all words. They show that after controlling the effect of general factors (e.g., size, book to market and etc.), both positive and negative words in 10-K filings tend to have incremental powers in explaining stock price reaction. They further claim that a proper choice of term weighting is more important relative to an accurate and complete set of word list.

Third, I summarize findings of studies that conduct content analysis on analyst reports and test their effect on stock reaction. Asquith et al. (2005) find that changes in stock recommendations, summary of earnings forecasts, target prices and strength of arguments provide independent information to the market and are able to explain five-day abnormal returns around the report date. Earnings forecasts have weaker effects on stock returns after including proxies for the strength of analysts' arguments. They also show that content information of analyst reports is most important for downgrading firms and the only significant factors in terms of reiterations are target prices and analysts' justifications. Twedt and Rees (2012) extend the research by Asquith et al. (2005) and claim that details are expected to reflect analysts' level of knowledge when preparing the reports and tones are expected to reflect analysts' underlying sentiments about firms. They find that details and tones of analyst reports can convey incremental information to market participants beyond the quantitative summary measures of reports. The details may explain cross-sectional variation in

stock prices after analysts' recommendations. The tone provides incremental information to analysts' recommendations and earnings forecasts.

Huang et al. (2014) show that analyst reports are more important when analysts emphasize on nonfinancial topics (e.g., customer satisfaction, brand recognition and corporate social responsibility). They also find that words in analyst reports are likely to have more predicting power for the subsequent five years' earning growth relative to quantitative summary measures. The rationale is that the content of analyst reports includes detailed fundamental analysis of management quality evaluation, strategic decisions and capital investments. Alternatively, Drake et al. (2011) suggest that analyst recommendation may obstruct the discovery process of market prices and thus can be associated with negative future stock performance. Conflict of interests is one rationale that adversely affect the quality of analyst recommendations.

Different from investigating the effect of all words together, Kothari, Li and Short (2009) and Huang et al. (2014) further analyse the positive and negative words separately. Kothari, Li and Short (2009) show that more positive disclosures by news reporters, managers and analysts are associated with decreasing firm risks measured as cost of capital and return volatility and vice versa. Huang et al. (2014) find that negative words are very likely to have larger market reaction relative to positive words and are twice as informative as positive words in forecasting earnings growth. These findings suggest that analyst reports are important for propagating bad news.

Fourth, I include studies that investigate the relationship between content of analyst reports and analysts' compensation. Analyst reports that cover investment banking businesses are associated with larger effect on analysts' compensation compared with the accuracy of earnings forecasts or the performance of their recommended stocks (Groysberg, Healy and Maber, 2011). As a result, analysts who wish to facilitate

potential underwriting relationships may provide favourable recommendations to influence their compensation structures, despite the recommendations are unable to justify firms' fundamentals (Agrawal and Chen, 2008).

4.3. Hypotheses

This section includes four different conjectures to conduct the content analysis of analyst reports on stock performance after the strategy change announcement date. In the first hypothesis, I focus on the effect of words in analyst reports as a whole. This analysis is motivated by Botosan (1997), Hirst et al. (1999), Lang and Lundholm (2000) and Bens and Monahan (2004), which consider the level of discretionary disclosure as a proxy of the management credibility. FACTIVA news of strategy change announcements are voluntary disclosures and managers may have less incentive to disclose all information needed by market participants, especially when they face challenges. In this case, analyst reports provide supplementary information and thus are more valuable relative to the simple FACTIVA news. Furthermore, analyst reports are more credible than voluntary disclosures as analysts are experts and can estimate their superior firm and industry information to provide a valuable estimation of firms' performance after the announcement date. Therefore, my first hypothesis is summarized as:

Hypothesis 1*: The tone in analyst reports of the strategy change announcement is very likely to provide incremental explanatory power for stock returns.*

My second hypothesis focuses on the effect of positive versus negative words in analyst reports. Managers tend to quickly announce good news but are less likely to include bad information in the announcement; therefore, analyst reports are an

important source of bad news (Hong et al., 2000; Miller, 2002; Kothari, Shu, and Wysocki, 2009). Under the situation of already receiving good news from managers, the inclusion of bad words in analyst reports might strongly affect the stock performance since the market may consider these reports as more prudent. The market might thus assume positive words in analyst reports as less reliable while consider negative words as more credible. Therefore, I formulate the following hypothesis:

Hypothesis 2*: The market tends to react more strongly to negative words in the analyst reports relative to positive words.*

My third hypothesis focuses on more versus less informative strategy change announcements. Managers are very likely to include more positive information in the announcement when they expect to encourage investments in a particular strategic direction. At the same time, more informative strategy change announcements have the benefits in terms of lower cost of capital, better stock performance and smaller information asymmetry (Botosan, 1997; Lang and Lundholm, 2000; Bens and Monahan, 2004; and Ferreira and Rezende, 2007). Therefore, analysts can analyse the detailed positive information to make better financial evaluations in their reports and enhance firm value.

In contrast, bad news increases the chance of financial distress and more severely the probability of management turnover. Managers are thus strongly incentivized to hide or delay announcing this bad information (Kothari et al., 2009). At the same time, some analysts are optimistically biased because of their incentives to maintain access to information of existing firms and to develop their businesses with more firms. Since textual information is hard to assess, investors in the market might be risk-averse to over-optimistic analyst reports (Das et al. 1998, Epstein and Echneider, 2008). Investors are very likely to have strong negative reaction when negative words are

included in analyst reports and the strategy change announcement is less informative. Therefore, my third hypothesis is summarized as:

Hypothesis 3a*: Positive words in analyst reports are associated with more positive stock reactions when strategy change announcements are more informative.*

Hypothesis 3b*: Negative words in analyst reports are associated with more negative stock reactions when strategy change announcements are less informative.*

My fourth hypothesis investigates the effect of analyst reports versus annual reports on the stock market movement. Despite firms are required to make annual reports, managers can voluntarily decide to include more or less information in terms of their changed/new strategies. This voluntary disclosure might not include sufficient information and thus is hard for investors to verify. Investors tend to reply more on analysts' analytical skills and industrial knowledge. They are more likely to perceive analysts' discussion of the strategy change announcements as more informative and more credible relative to managers' disclosures. Therefore, my fourth hypothesis posits:

Hypothesis 4*: Analyst reports are very likely to have stronger market reactions after the strategy change announcement date relative to annual reports.*

4.4. Data and Methodology

This section includes the data and methodology used to test my four proposed hypotheses. First, I introduce the process of collecting firms that have strategy change announcements (i.e., event firms). Strategy change announcements mean that firms refine their current strategies to change their operational direction (i.e, major changes) or announce different strategies that were not part of their original strategies (i.e., new

strategies). New strategies aim to provide a new direction for, and a repositioning of, firms' long-term operations. More specifically, the content of strategy change announcements includes: new markets that event firms try to expand into; new approaches to compete or maintain leadership; new products or services that event firms plan to launch; reasons for collaborating with new strategic partners; new involvement with e-commerce and other firm specific strategies introduced by event firms.

In the chapter, the sample only includes firms that made public announcements about a new strategy or major refinements in firms' current strategies from 1 January 2010 to 31 December 2015. The event firms are headquartered in the U.S. and are listed on the NYSE, AMEX or NASDAQ. The strategic information of firms is manually collected from FACTIVA and EDGAR by searching keywords such as "new* … strateg*", "chang* … strateg*", "modif* …strateg*", "alter* …strateg*" and "amend* … strateg*". The "*" in the keywords allows to search for the root of a word followed by one or more characters. At the same time, keywords are searched at a maximum of 5 words apart in FACTIVA.

Some firms may have more than one FACTIVA news in terms of the strategy change announcements. For each single announcement, this chapter only uses the earliest announcement date when event firms announce their strategy change news at the first time and the remaining ones are removed. Using the initial public announcement date can mitigate the effects of other concurrent information and thus might obtain a "cleaner effect" of strategy change announcement on stock prices movement. Furthermore, firms with FACTIVA news that contains less than 100 words generally offer fewer details and thus are excluded. In addition, I require each firm to have at least 2 strategy change announcements over different years. The latter announcement date of the 2 strategy strategic changes is defined as the event date and the previous

date is denoted as the estimation date. In line with the literature (e.g. Hoberg et al., 2014), I further exclude firms with SIC code in the range of 4900-4949 (utility firms) and 6000-6999 (financial institutions). Private firms are deleted due to the unavailable information of stock prices. Public firms that have missing data are also deleted. I also exclude firms that have mergers and acquisitions in their strategy events. Therefore, the final sample includes 133 event firms.

Second, I collect analyst reports in terms of the 133 sample firms. Analyst reports are collected by using dates 0 to 3 when they reflect the strategy change announcements of event firms. The four days also allow analysts to spend sufficient time on investigating the value of the strategy change announcements. In total, 721 analyst reports are manually collected for the 133 event firms.

Third, I introduce the methodology. This chapter aims to conduct a content analysis on the tones of strategy change announcements. Previous literature classifies a list of positive and negative words and shows that the market reaction is associated with the relative proportion of positive or negative words to the total words in the documents (Tetlock, 2007; Tetlock et al., 2008; Feldman et al., 2010; Loughran and McDonald, 2011). Nevertheless, these papers assume that all words in the positive (negative) word list have an equal positive (negative) impact. This indicates that the word "good" has the same positive impact with the word "best". Similarly, the word "bad" has the same negative impact with the word "worst". The equal effect among words is not consistent with what we observe in reality.

In order to avoid potential biases from assigning wrong weightings to the positive and negative words, this chapter takes the approach proposed by Jegadeesh and Wu (2013). Specifically, for each document, Jegadeesh and Wu (2013) define a score which is positively correlated with the occurrence of each positive or negative word.

This score is also positively correlated with the strength of each positive or negative word and inversely related to the total words in the document. The score for a document *i* is formally presented as:

$$\text{Score}_i = \sum_{\text{j=1}}^{\text{J}} (w_j F_{i,j}) \frac{1}{a_i} \tag{4.1}$$

Where w_j denotes the weight for word j, $F_{i,j}$ denotes the number of occurrences of word j in the document i. $1/a_i$ captures the effect that the score has a negative relationship with the total words in the document.

Following Jegadeesh and Wu's (2013) approach, the document score is correlated with the stock returns of companies that publicly release their strategy change announcement. The purpose is to measure the extent of information that the tone of the strategy change announcement can convey to the market. The relationship can be shown as:

$$\begin{aligned} \text{r}_i &= a + b\left(\sum_{\text{j=1}}^{\text{J}} (w_j F_{i,j}) \frac{1}{a_i}\right) + \varepsilon_i \\ &= a + \left(\sum_{\text{j=1}}^{\text{J}} (bw_j F_{i,j}) \frac{1}{a_i}\right) + \varepsilon_i \end{aligned} \tag{4.2}$$

Where r_i denotes the abnormal return when the i^{th} strategy change announcement is released. In the equation, $F_{i,j}$ and a_i can be calculated directly. However, the weighting, bw_i, associated with each word is estimated by using the following regression equation:

$$\text{r}_i = a + \left(\sum_{\text{j=1}}^{\text{J}} (B_j F_{i,j}) \frac{1}{a_i}\right) + \varepsilon_i \tag{4.3}$$

Where B_j denotes the regression coefficients and provides an estimate for bw_j. At this stage, b and w_j cannot be estimated separately because the weighting measures the strength of each word in the lexicon. Nevertheless, the weights can be scaled arbitrarily. Jegadeesh and Wu (2013) standardise the estimates of B_j's to provide an estimate of the weight of each word in the lexicon:

$$\widehat{\mathrm{w}}_j = \frac{\widehat{\mathrm{B}}_j - \bar{B}}{Standard\ Deviation\left(\widehat{\mathrm{B}}_j\right)} \tag{4.4}$$

Where $\widehat{\mathrm{w}}_{\mathrm{j}}$ denotes the estimate for wj, $\widehat{\mathrm{B}}_j$ denotes the slope coefficient estimated from the Regression (4.3), $\bar{B}$ denotes the mean of all $\widehat{\mathrm{B}}_j$.

Importantly, I first estimate the $\widehat{\mathrm{w}}_j$ by using words included in analyst reports and abnormal returns around the strategy change announcement dates during the estimation window. Then $\widehat{\mathrm{w}}_j$ is applied to estimate the score of analyst reports during the event window by using the Equation (4.1).

Next, I examine the impact of the score on the stock returns by using the following regression:

$$\mathrm{r}_i = a + b\left(\sum_{\mathrm{j}=1}^{\mathrm{J}} (\widehat{w}_j F_{i,j}) \frac{1}{a_i}\right) + \varepsilon_i \tag{4.5}$$

In the first stage regression using the Equation (4.2), stock returns are regressed on the occurrence of positive (negative) words in analyst reports during the estimation windows. If the occurrence of positive (negative) words is associated with positive (negative) stock returns, the positive (negative) weight power is very likely to have a positive (negative) coefficient and have positive (negative) standardized weights $\widehat{\mathrm{w}}_{\mathrm{j}}$. In the second stage using the Equation (4.5), stock returns are regressed on the positive (negative) word weight power that is estimated by using Equations (4.4) and (4.1) during the event window. If the occurrence of positive (negative) words is associated with the stock returns, the positive (negative) weight power is more likely to have a positive coefficient. In other words, the occurrence of positive (negative) words in analyst reports have incremental predicting power on stock returns.

Therefore, the null hypothesis in Equation (4.5) is that *b* is equal to zero and indicates that the tone measurement for the annual reports does not convey any incremental information to the market. The alternative hypothesis is that *b* is statistically greater than zero and suggests that the tone measurement provides incremental information to market participants.

4.5. Summary Statistics and Findings

This section explains the summary statistics of firms' main characteristics at one accounting year before the strategy change announcement date and show regression results of testing the four hypotheses in Section 4.3.

In Tables 4.1 to 4.9, all variables are winsorised at the 1st and 99th percentile to minimize potential detrimental effect of outliers. Variable definitions are reported in Appendix 4.7. Tables 4.2 to 4.9 also include size, book to market of equity, volatility, turnover, accruals and momentum factor as control variables (Jegadeesh and Wu, 2013). According to Jegadeesh and Wu (2013), risky firms tend to state the potential consequences for the risk that they take compared to safe firms. Likewise, firms with recent poor performance are likely to explain the reasons for such performance. As a result, tones of analyst reports can be affected by different firm-specific factors. This chapter includes firm-specific factors such as size, book to market, momentum, volatility, turnover and accruals. Size and volatility measure the risk of firms. Riskier firms tend to have more negative tone. Book to market ratio indicates growth or value firms. Growth firms tend to be more cautious with the information they disclose to the public. Accruals represent changes in working capital. This may be caused by bad business conditions or earning manipulation. Turnover measures whether a particular

stock is attractive to investors. Momentum is a proxy for recent industry stock performance and thus is also included. These variables are measured at one accounting year before the strategy change announcement date.

The announcement day returns are also included since analysts are more likely to react to the price movement at the announcement dates. Furthermore, analysts' estimation of target prices might be changed in analyst reports and thus change in target prices is included as a control variable.

4.5.1. Summary Statistics

Table 4.1 shows the summary statistics of firms' main characteristics and information included in analyst reports. Mean and median of market value is USD4.31 billion and USD1.78 billion respectively, indicating that some sample firms have high market value and thus a high standard deviation (USD5.38 billion). Mean, standard deviation and median of size show consistent values. Mean and median of book to market ratios are smaller than 1 (0.436 and 0.344) and indicate higher market value of equity relative to book value of equity. Mean and median of volatility are 0.086 and 0.071, respectively, indicating that the change of stock returns is 8.6% on average over the last 60 months before the announcement date. Mean and median of turnover are 0.653 and 0.592, respectively. Mean and median of accruals are 0.094 and 0.062, respectively.

- Insert Table 4.1 about here -

Table 4.1 also includes momentum which is a monthly data downloaded from Kenneth R. French Data Library and is matched with the event month. Mean and median of

momentum are 0.002 and 0.001, respectively. This indicates that industry stock prices of event firms keep increasing before the announcement date. Recommendation change dummy shows that 26.1% of analysts change their recommendation of firms' stocks after the strange change announcement date. At the same time, analysts' forecasting of target price and EPS increase by 4% and 2.6% respectively, implying higher expectation of strategic operations in the analyst reports.

4.5.2. Tones in Analyst Reports

Tables 4.2 to 4.5 show the regression results of positive and negative weight powers on the stock price movement. The dependent variable is the market adjusted cumulative abnormal returns over a 4-day period after the announcement date (i.e., CAR [0, 3]) (Loughran and McDonald, 2011; Jegadeesh and Wu, 2013). Year fixed effects and Fama-French 12 industry effects are also included, but the coefficient estimates are not reported to preserve space.

Models 1 and 3 in Table 4.2 show that coefficients of positive weight powers are significant at the 10-percent level. This indicates that the occurrence of positive words in analyst reports have some incremental predicting power for explaining stock returns. In other words, higher weight power for positive words is associated with higher abnormal returns after the announcement date. Models 2 and 3 also show that negative weight power exhibits incremental explanatory power stock returns: their coefficients are positive and significant at the 5-percent level. It suggests that higher occurrence of negative words tends to have more negative returns. These findings are consistent with my first hypothesis that positive and negative words in analyst reports tend to provide incremental power for explaining stock returns after the strategy change announcement date.

- Insert Table 4.2 about here -

If comparing positive versus negative words, Table 4.2 shows that coefficients (2.796 *versus* 1.089) and significance (5-percent *versus* 10-percent level) of the negative weight power are higher relative to the positive weight power. In line with Hypothesis 2, the incremental predicting power of negative words tends to be higher compared with positive words. In other words, market participants react more strongly to negative words in the analyst reports relative to positive words. These findings are consistent with Asquith et al. (2005) and Huang et al. (2014). Size, momentum and accruals are negatively associated with stock returns and book to market, announcement day return and change in target prices are positively correlated with stock returns. Stock prices are more likely to increase when analysts increase their target price estimation in analyst reports.

Next, I include two examples to introduce the process of classifying the "more" and "less" informative strategy change announcements, explain the two corresponding sub-sample sizes and investigate different effects of positive and negative words in analyst reports.

It is under managers' discretion whether the disclosed strategy change announcements are more informative or less informative. The informative discretionary disclosure is found to be associated with lower cost of capital, better stock performance and smaller information asymmetry (Botosan, 1997; Lang and Lundholm, 2000; Bens and Monahan, 2004 and Ferreira and Rezende, 2007). As a result, when managers plan to encourage investments in a particular strategic direction, they are likely to reveal the private information on their corporate strategies.

First, more informative announcements include detailed processes to implement changed/new strategies. For example, people separately used smartphones and laptops before 2010, thus Apple Inc. announced a new strategy about developing a new mobile device that sit between smartphone and laptop. People are able to use the new mobile device to browse websites, display electronic books and play games. In 2010, Apple Inc. introduced an electronic tablet called "IPad" and believes that it is more capable than a smart phone and at the same time more intimate than a laptop. Reuters News (2010) conducted an online poll to more than 1,000 respondents. Nearly 30% of respondents had no interest in IPad, 37% of respondents were willing to buy IPad for 500 to 699 USD and 20% would pay 700 to 899 USD. On the releasing date, the sale price of IPAD was announced to be 499 USD. Apple Inc estimated to sell up to 4 million IPads in the first year and expected to generate sales of more than 4 billion USD in 2011 (Dow Jones Institutional News, 2010). The news about Apple Inc's new strategy includes a detailed description of the appearance and capacity of IPad and summarizes the market research of the price that consumers are willing to pay for before releasing. It also includes an estimation of annual sales of IPad after announcing the price. It further provides information about the profitability of Apple iPad's 3G services cooperated with its partner AT&T Inc. Therefore, I rate the strategy change announcement of Apple Inc as 10/10 for the highest level of informative disclosures and classify Apple Inc. and other similar firms as event firms with "more informative" strategy change announcements.

Less informative announcements may only state their strategies in terms of goals that they wish to achieve without a detailed description of the implementation steps. For example, Financial News (2012) shows that Tower Watson planned to adjust their strategies in an economy where the scarcity was an increasingly common phenomenon. Tower Watson also mentioned some targets including providing growth, introducing new technologies and hedging against future inflation. Nevertheless, the

company did not include detailed implementation steps in the news. Therefore, I rate the strategy change announcement of Tower Watson as 3/10 for the low level of informative disclosures and classify this firm and other similar firms as event firms with “less informative” strategy change announcement.

Second for the two sub-samples, each event may have more than one FACTIVA news on the event date. Thus, 562 FACTIVA news reports are collected for 133 event firms. To investigate the effect of informativeness on stock performance, I combine different reports of one announcement into one news item and then divide the 133 news items into “more or less informative” strategy change announcements. In this chapter, I depend on the median grade of informativeness of the 133 news and thus I divide the full sample into two halves. News of 67 firms are classified as more informative strategy change announcements and the remaining 66 are classified as less informative announcements.

Table 4.3 reports the results for the 67 event firms with more informative strategy change announcements. The 67 firms have 439 analyst reports. Coefficients of positive weight power are more significant (at the 5-percent level) compared with coefficients in Table 4.2 while coefficients of negative weight power are less significant relative to Table 4.2. One explanation is that more informative strategy change announcements provide additional information to the market to make better evaluation, and thus enhance the predicting power of positive words. The more informative strategy change announcements disclose more information in terms of detailed process to implement their strategies and include detailed steps to achieve their goals. In line with Hypothesis 3a, my findings suggest that when strategy change announcements are more informative, higher occurrence of influential positive words in analyst reports exhibit more positive abnormal returns.

- Insert Table 4.3 about here -

Table 4.4 reports regression results for the 66 firms with less informative strategy change announcements. These 66 firms have 282 analyst reports. Coefficients of positive weight power become insignificant due to less information disclosed. Nevertheless, coefficients of negative weight power are more statistically significant (at the 5-percent level) relative to Table 4.3. As firms usually only list their goals without showing market their implement approaches, the market might be very reluctant to trust all the positive things promised by the firm. In contrast, the market tends to evaluate more thoroughly potential risks that firms might face when negative words are included. Therefore, in line with Hypothesis 3b, my findings indicate that higher occurrence of influential negative words in analyst reports exhibit larger negative stock reactions when strategy change announcements are less informative.

- Insert Table 4.4 about here -

Additionally, firms that have strategy change announcements at one year are more likely to have different news last year (e.g., sales growth, charity, lawsuits and layoffs). Analysts would then evaluate the news based on their information about the event firms and their corresponding industry specific factors. To differentiate the effect of strategy change announcements versus other types of analyst reports. I examine the impact of change in tones of analyst reports over different years.

Table 4.5 reports the change in tone of analyst reports between time *t* with strategy change announcements and time *t-1* without strategy change announcements by using the following regression:

$$\Delta r_i = a + \beta \times \Delta Score_i + b \times Size_i + c \times BM_i + d \times Volatility_i + e \times Turnover_i + f \times EADRet_i + g \times Accruals_i + \varepsilon_i \quad (4.6)$$

Note that the score in the Equation (4.6) is estimated using the one-stage regression. That is, I estimate the weightings for $score_t$ and $score_{t-1}$ by using the estimation steps from Equations (4.2) to (4.4) and then calculate the two scores by using the Equation (4.1).

Table 4.5 reports results of regressing change in CAR [0, 3] on change in positive or/and negative weight powers. I use change in CAR [0, 3] rather than CAR [0, 3] as the dependant variable to eliminate the time effect of last analyst reports on stock prices. In other words, change in CAR [0, 3] captures the adjusted abnormal stock price movement over different time periods. I find that coefficients of change in positive word weight power are positive but not significant in models 1 and 3. This indicates that change in stock returns is not associated with change in positive word weight power. Nevertheless, coefficients of change in negative weight power are negative and significant (at 5-percent level). This suggests that a 1% increase in negative word weight power (i.e., negative score is less negative) exhibits 1.38% higher abnormal returns, assuming all other factors remain constant. Thus, it appears investors focus more on the inclusion of negative words in analyst reports because analysts have access to more financial information and are generally more skillful in identifying risk.

- Insert Table 4.5 about here -

Next, I study the effects of positive and negative weight powers on event firms' trading volume. In Table 4.6, to avoid the January effect, the dependent variable is the average fraction of shares traded over the period [0, 3] minus the fraction over the same length but at 1 year ago (i.e., average fraction of shares traded over the period [-365, -362]). Same control variables except for turnover are included in the table, as turnover is just another measure of the trading volume. Therefore, I investigate the change in trading

volume around the strategy change announcement date between year *t* and *t-1* by using the following regression,

$$\Delta Volume_i = a + \beta \times Score_i + b \times Size_i + c \times BM_i + d \times Volatility_i$$
$$+e \times Turnover_i + f \times Accruals_i + g \times Announcement\ Day\ Return_i$$
$$+h \times Target\ Price\ Change_i + \varepsilon_i \quad (4.7)$$

Table 4.6 shows that coefficients of positive weight power are positive and significant (at the 5-percent level) and indicates that higher occurrence of positive words in analyst reports is associated with higher stock trading volume. Negative weight power also has positive coefficients but is only significant in Model 2. However, coefficient (1.045 versus 5.045) and significance (at the 10-percent versus the 5-percent level) of negative weight power are smaller relative to the positive weight power. This suggests that higher weights in negative words tend to have higher trading volume but the effect is small relative to positive words.

- Insert Table 4.6 about here -

Two control variables (i.e., momentum and announcement day return) have similar coefficients relative to Table 4.2. However, size is positively correlated with trading volume, indicating that large firms tend to have higher trading volume. Coefficients of volatility are positive and imply higher trading volume for firms with high stock variation. Coefficients of book to market, accruals and change in target prices are negative but not significant.

Overall, this section finds that higher occurrence of influential positive (negative) words in analyst reports exhibit more positive (negative) stock performance. Furthermore, I find that when strategy change announcements are more informative, positive words in analyst reports have more positive abnormal returns. It indicates

market's confidence in positive words included in analyst reports. Nevertheless, negative words are associated with more negative stock reaction when the announcements are less informative. It is because of more attention to negative information by market participants. In addition, both positive and negative words are associated with higher trading volume and the effect is higher for positive words relative to negative words.

4.5.3. Tones in Analyst Reports versus Annual Reports

Strategy change announcements are soft talk information and contain firms' direction in terms of long-term development and operation. However, the qualitative soft talk information is harder to evaluate and absorb. To investigate whether market participants rely on analysts' industrial knowledge and analytical skills, analyst reports are compared against annual reports. The event dates for the 721 analyst reports refer to the initial public announcement dates in FACTIVA. The event dates for the 133 annual reports are the firms' fiscal year ending dates which are exactly after the corresponding initial FACTIVA news dates.

Table 4.7 reports the results and I exclude change in target prices as a control variable as it is unavailable in annual reports. Model 1 shows that coefficients of positive words are positive and not significant, indicating that positive words in annual reports tend to not affect stock returns. Analyst report dummy is negative and significant at the 1-percent level. It suggests that analyst reports have a negative impact on abnormal returns relative to annual reports because they may include negative information which are excluded in annual reports. Compared with annual reports, higher weights of positive words in analyst reports are associated with higher stock returns: the interaction term 'Positive Weight Power * Analyst Report Dummy' is positive and significant at the 5-percent level. The total effect ('Positive Weight Power' + 'Positive

Weight Power * Analyst Report Dummy') is also positive and significant. This suggests that market participants are reluctant to trust positive things promised by managers. They rather rely more on analysts' industrial knowledge and analytical skills.

- Insert Table 4.7 about here -

Model 2 in Table 4.7 shows that coefficients of negative weight power and the interaction term 'Negative Weight Power * Analyst Report Dummy' are positive and significant at the 5-percent level. The total effect ('Negative Weight Power' + 'Negative Weight Power * Analyst Report Dummy') for negative words in analyst reports is also positive and significant. These findings suggest that higher weights of negative words in both annual and analyst reports are associated with more negative stock performance. The impact is stronger for negative words in analyst reports. Model 3 include both positive and negative weight powers and show consistent results.

In summary, results in Table 4.7 support Hypothesis 4 that positive and negative words in analyst reports tend to have stronger market reactions relative to that in annual reports. In particular, analysts are more reliable for propagating bad news and investigating the potential risks and challenges that companies may face when event firms change their current strategies or announce a new strategy.

4.5.4. Robustness Check

Finally, I conduct one robustness check of positive and negative words in analyst reports by using different word lists. In Tables 4.2 to 4.7, I use the Loughran and McDonald (2011) lexicon to estimate positive and negative weight powers. In Table 4.8, I use the Harvard Psychosociological Dictionary H4N lexicon. In line with Table 4.2, results are similar and thus are robust. Nevertheless, Table 4.8 show that positive

and negative weight powers have positive but smaller coefficients relative to Table 4.2. It suggests that both positive and negative words have smaller incremental predicating power on stock returns as the Harvard Psychosociological Dictionary H4N word list include some misclassified words. These misclassified words like capital, board, cost and liability are neither positive nor negative in financial contents. Overall, these findings provide evidence to support Loughran and McDonald (2011) that their word list can better reflect the tone in financial contents.

- Insert Table 4.8 about here -

4.6. Conclusion

This chapter uses the approach proposed by Jegadeesh and Wu (2013) to investigate the impact of positive and negative words in analyst reports on the stock price around the strategy change announcement date. I include 721 analyst reports for 133 firms from 2010 to 2015. Overall, the chapter finds that both positive and negative words in analyst reports have incremental predicting powers on stock returns. Higher occurrence in positive (negative) words are associated with more positive (negative) abnormal returns. The results are robust after changing the Loughran and McDonald's (2011) lexicon to the Harvard Psychosociological Dictionary H4N word list.

Further, impacts of positive and negative words differ in more versus less information strategy change announcements. This chapter shows that higher occurrence of influential positive (negative) words in analyst reports leads to more positive (negative) stock returns when strategy change announcements are more (less) informative. This suggests that market participants trust positive tones of analyst

reports when announcements are more informative. For less informative announcements, they emphasize more on negative tones and do not pay much attention to positive ones. I confirm these findings by showing that increasing occurrence of positive words have no effect on abnormal returns over different time periods. Nevertheless, increasing occurrence of negative words are associated with decreasing stock performance. This further confirms that the market pays more attention to negative information included by analysts.

In addition, this chapter shows that higher occurrence of positive and negative words both exhibit larger trading volume. Nevertheless, the effect is stronger for positive words relative to negative words. This chapter also compares words in analyst reports versus annual reports in terms of strategy change announcements. Both positive and negative words in analyst reports are associated with higher impacts on abnormal returns (i.e., more positive and more negative) relative to annual reports. It indicates that market participants rely more on analyst reports because analysts are important in propagating bad news and investigating firms' potential risks and challenges when firms announce changed/new strategies.

4.7 Appendix

Variable Definition

Variable	Definition	Source
Accruals	One-year change in current assets excluding cash minus change in current liabilities excluding long-term debt in current liabilities and taxes payable minus depreciation divided by average total assets. Based on Jegadeesh and Wu (2013).	COMPUSTAT; CRSP
Analyst Report Dummy	A dummy variable equals to 1 for analyst reports and 0 for annual reports.	Hand Collection
Announcement Day Return	The abnormal return at the event date.	CRSP
AR	The daily difference between the raw return of a firm and the expected return (i.e., S&P500).	CRSP; DataStream
Book to Market	Book value of equity divided by the market capitalization at one accounting year before the strategy change announcement date.	COMPUSTAT; CRSP
CAR	Cumulative abnormal returns for a firm over a period of time.	CRSP; DataStream
Change in Negative Weight Power	The difference in negative weight power of analyst reports for event firms with strategy change announcements versus without announcements at 1 year ago.	CRSP; Hand Collection
Change in Positive Weight Power	The difference in positive weight power of analyst reports for event firms with strategy change announcements versus without announcements at 1 year ago.	CRSP; Hand Collection
Change in Trading Volume	The average fraction of shares traded over the period [0, 3] minus the fraction over the same length but at 1 year ago. Date 0 denotes the strategy change announcement date.	CRSP
EPS Forecast Change	The percentage change of EPS fore-casting in analyst reports.	Hand Collection

Variable	Definition	Source
Informative Announcement	Dummy variable equals to 1 when event firms provide with detailed information about strategy change announcements and 0 otherwise.	Hand Collection
Momentum	The difference between the monthly average return of the two high prior return portfolios and the monthly average return of the two low prior return portfolios. It is denoted as, Momentum = 1/2*(Small High + Big High) – 1/2*(Small Low + Big Low). It is positive in case prices keep increasing and negative in case prices keep decreasing. Based on Kenneth R. French - Data Library.	Kenneth R. French - Data Library
Recommendation Change Dummy	Dummy variable equals to 1 in case the analysts change their recommendation (buy, sell or hold) of a firm in analyst reports and 0 otherwise.	Hand Collection
Size	Natural logarithm of the market value of equity at one accounting year before the strategy change announcement date.	COMPUSTAT; CRSP
Target Price Change	The percentage change of target price estimation in analyst reports.	Hand Collection
Turnover	The natural logarithm of the number of shares trading during the period from 6 to 252 trading days before the event date divided by the number of shares outstanding on the filing date. Based on Jegadeesh and Wu (2013).	CRSP
Volatility	The standard deviation of the firm-specific component of returns that are estimated using up to 60 months of data. Based on Jegadeesh and Wu (2013).	CRSP

Table 4.1 – Summary Statistics

This table reports the summary statistics of my sample over the period 2010-2015. The sample consists of 133 event firms and 721 analyst reports. The event firms are companies that announce strategy change announcements during the sample period. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. All variables are estimated at one accounting year before the announcement date.

	(1) Mean	(2) Standard Deviation	(3) Median
Market Value (million USD)	4307.2	5382.6	1777.3
Size	7.550	1.616	7.482
Book to Market	0.436	0.381	0.344
Momentum	0.002	0.024	0.001
Volatility	0.086	0.089	0.071
Turnover	0.653	0.934	0.592
Accruals	0.094	0.171	0.062
Recommendation Change Dummy	0.261	0.440	0
Target Price Change	0.040	0.104	0.031
EPS Forecast Change	0.026	0.082	0.001

Table 4.2 – Strategy Change Announcement Period Abnormal Returns

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is CAR [0, 3]. The sample consists of 721 analyst reports from 133 event firms. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.008**	**-0.012**	**-0.011**
	(-0.300)	(-0.720)	(-0.615)
Positive Weight Power	**1.094***		**1.089***
	(1.908)		(1.892)
Negative Weight Power		**2.211****	**2.796****
		(2.479)	(2.315)
Control Variables			
Size	**-0.007*****	**-0.006*****	**-0.008*****
	(-5.280)	(-5.013)	(-5.192)
Book to Market	**0.033*****	**0.037*****	**0.040*****
	(3.226)	(3.181)	(3.217)
Momentum	**-1.431*****	**-1.344*****	**-1.520*****
	(-4.126)	(-4.223)	(-4.046)
Volatility	**0.710**	**0.886**	**0.929**
	(0.687)	(0.658)	(0.694)
Turnover	**0.007**	**0.008**	**0.008**
	(1.389)	(1.507)	(1.382)
Accruals	**-0.514*****	**-0.611*****	**-0.646*****
	(-2.892)	(-2.863)	(-2.885)
Announcement Day Return	**0.612****	**0.705*****	**0.681****
	(2.573)	(2.615)	(2.563)
Target Price Change	**0.145****	**0.136****	**0.185****
	(2.575)	(2.394)	(2.572)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	721	721	721
R^2	0.158	0.157	0.158
F	5.620	6.970	5.350

Table 4.3 – More Informative Strategy Change Announcements

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is CAR [0, 3]. The sample consists of 439 analyst reports from 67 event firms with more informative strategy change announcements. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.017**	**-0.013**	**-0.021**
	(-0.528)	(-0.316)	(-0.629)
Positive Weight Power	**0.971****		**0.868***
	(2.117)		(1.901)
Negative Weight Power		**0.849***	**0.370***
		(1.936)	(1.816)
Control Variables			
Size	**-0.005*****	**-0.005*****	**-0.006*****
	(-4.636)	(-4.389)	(-4.547)
Book to Market	**0.042*****	**0.048*****	**0.051*****
	(3.846)	(3.812)	(3.812)
Momentum	**-1.251*****	**-1.175*****	**-1.345*****
	(-3.447)	(-3.442)	(-3.358)
Volatility	**1.248**	**1.103**	**1.345**
	(0.568)	(0.543)	(0.564)
Turnover	**-0.003**	**-0.002**	**-0.004**
	(-0.350)	(-0.322)	(-0.345)
Accruals	**-0.248**	**-0.291**	**-0.349**
	(-1.237)	(-1.196)	(-1.237)
Announcement Day Return	**1.146*****	**1.276*****	**1.347*****
	(3.178)	(3.222)	(3.165)
Target Price Change	**0.160*****	**0.149****	**0.180*****
	(2.593)	(2.384)	(2.579)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	439	439	439
R^2	0.159	0.158	0.159
F	4.310	5.150	4.220

Table 4.4 – Less Informative Strategy Change Announcements

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is CAR [0, 3]. The sample consists of 282 analyst reports from 66 event firm with less informative strategy change announcements. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.216**	**0.197**	**0.182**
	(1.651)	(1.532)	(1.470)
Positive Weight Power	**0.687**		**0.731**
	(1.507)		(1.369)
Negative Weight Power		**1.023****	**1.240****
		(2.061)	(2.075)
Control Variables			
Size	**-0.020*****	**-0.018*****	**-0.018*****
	(-6.213)	(-3.362)	(-3.429)
Book to Market	**-0.028**	**-0.026**	**-0.024**
	(-0.466)	(-0.436)	(-0.394)
Momentum	**-9.715****	**-7.727**	**-8.440**
	(-2.361)	(-1.506)	(-1.483)
Volatility	**-1.126**	**-1.070**	**-1.191**
	(-0.429)	(-0.371)	(-0.376)
Turnover	**0.047*****	**0.037****	**0.035****
	(3.486)	(2.106)	(2.093)
Accruals	**-2.856*****	**-2.274*****	**-2.669*****
	(-7.512)	(-5.057)	(-5.038)
Announcement Day Return	**-0.351**	**-0.294**	**-0.370**
	(-0.465)	(-0.395)	(-0.430)
Target Price Change	**-0.118**	**-0.123**	**-0.105**
	(-0.698)	(-0.916)	(-0.701)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	282	282	282
R^2	0.147	0.176	0.166
F	6.850	8.630	7.610

Table 4.5 – Analyst Reports Tone Change

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is the difference between CAR [0, 3] and the CAR over the same period but at 1 year ago. The sample consists of 721 analyst reports from 133 event firms. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: Change in CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.010**	**0.032****	**0.030***
	(0.770)	(2.049)	(1.892)
Change in Positive Weight Power	**1.051**		**0.857**
	(1.341)		(1.127)
Change in Negative Weight Power		**1.384****	**1.298****
		(2.045)	(1.971)
Control Variables			
Size	**-0.005*****	**-0.004*****	**-0.004*****
	(-4.021)	(-3.949)	(-4.100)
Book to Market	**0.024*****	**0.027*****	**0.031*****
	(3.533)	(3.759)	(3.746)
Momentum	**-0.216**	**-0.258**	**-0.265**
	(-1.313)	(-1.347)	(-1.373)
Volatility	**-0.273**	**-0.646**	**-0.478**
	(-0.325)	(-0.803)	(-0.570)
Turnover	**0.003**	**0.005**	**0.004**
	(0.565)	(0.773)	(0.680)
Accruals	**-0.233**	**-0.185**	**-0.194**
	(-1.213)	(-0.967)	(-0.964)
Announcement Day Return	**0.759*****	**0.825*****	**0.870*****
	(3.394)	(3.535)	(3.550)
Target Price Change	**0.328*****	**0.223*****	**0.334*****
	(3.183)	(3.124)	(3.189)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	721	721	721
R^2	0.097	0.141	0.141
F	2.170	2.430	2.870

Table 4.6 – Strategy Change Announcement Period Trading Volume

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is the difference between average fraction of shares traded over period [0,3] and the fraction over the same period but at 1 year ago. The sample consists of 721 analyst reports from 133 event firms. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 5 control variables are estimated at one accounting year before the strategy change announcement date. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: Change in Volume	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.004**	**-0.007***	**-0.003**
	(-1.439)	(-1.740)	(-1.541)
Positive Weight Power	**5.045****		**4.136****
	(2.330)		(2.313)
Negative Weight Power		**1.045***	**0.903**
		(1.909)	(1.553)
Control Variables			
Size	**0.0003***	**0.0004****	**0.0003***
	(1.903)	(2.492)	(1.931)
Book to Market	**-0.0007**	**-0.0009**	**-0.0007**
	(-0.508)	(-0.672)	(-0.535)
Momentum	**-0.133****	**-0.129****	**-0.144****
	(-2.144)	(-2.172)	(-2.154)
Volatility	**0.214****	**0.303****	**0.198****
	(2.328)	(2.515)	(2.442)
Accruals	**0.019**	**0.015**	**0.014**
	(0.608)	(0.544)	(0.562)
Announcement Day Return	**0.128****	**0.167****	**0.109****
	(2.371)	(2.469)	(2.384)
Target Price Change	**-0.006**	**-0.010**	**-0.008**
	(-0.368)	(-0.626)	(-0.370)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	721	721	721
Adjusted R^2	0.122	0.098	0.123
F	3.790	3.180	3.420

Table 4.7 – Analyst Reports versus Annual Reports

This table reports the regression results of my sample over the period 2010-2015 using the Loughran and McDonald (2011) lexicon. The dependent variable is CAR [0, 3]. The sample consists of 721 analyst reports and 133 annual reports. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**0.014**	**0.013**	**0.021**
	(1.083)	(1.029)	(1.548)
Positive Weight Power	**1.104**		**1.973**
	(1.390)		(1.112)
Negative Weight Power		**1.937****	**1.495****
		(2.166)	(2.010)
Analyst Report Dummy	**-0.044*****	**-0.041*****	**-0.049*****
	(-4.292)	(-4.172)	(-5.049)
Positive Weight Power*	**1.581****		**2.744****
Analyst Report Dummy	(2.029)		(1.989)
Negative Weight Power*		**2.974****	**3.469****
Analyst Report Dummy		(2.222)	(1.992)
Control Variables			
Size	**-0.005*****	**-0.003*****	**-0.004*****
	(-4.552)	(-4.358)	(-4.963)
Book to Market	**0.042*****	**0.041*****	**0.042*****
	(4.459)	(4.145)	(4.341)
Momentum	**-0.841*****	**-0.818*****	**-0.969*****
	(-4.072)	(-4.406)	(-5.361)
Volatility	**0.992**	**0.959**	**1.038**
	(1.318)	(1.280)	(1.369)
Turnover	**0.006**	**0.007**	**0.004**
	(1.559)	(1.564)	(1.386)
Accruals	**-0.168**	**-0.170**	**-0.229****
	(-1.255)	(-1.322)	(-2.017)
Announcement Day Return	**1.247*****	**1.241*****	**1.199*****
	(5.639)	(5.579)	(5.410)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (Analyst + Annual Reports)	854	854	854
Adjusted R^2	0.177	0.163	0.185
F	5.560	6.160	6.900

Table 4.8 – Event Period Abnormal Returns: Different Word Lists

This table reports the regression results of my sample over the period 2010-2015 using the Harvard Psychosociological Dictionary H4N lexicon. The dependent variable is CAR [0, 3]. The sample consists of 721 analyst reports from 133 event firms. Coefficient estimates are shown in bold and t-statistics are displayed in parenthesis. All variables are defined in Appendix 4.7 and winsorized at the 1st and 99th percentile to minimise the potential detrimental effect of outliers. The first 6 control variables are estimated at one accounting year before the strategy change announcement date. T-statistics are calculated using White (1980) heteroscedasticity robust standard errors. Year fixed effects and Fama-French 12 industry effects are included, but the coefficient estimates are not reported. ***, ** and * denotes significance at 1%, 5% and 10% levels, respectively.

Dependent Variables: CAR [0, 3]	Model 1	Model 2	Model 3
Term Weighting Scheme			
Constant	**-0.019**	**-0.016**	**-0.018**
	(-1.143)	(-1.058)	(-1.132)
Positive Weight Power	**0.368***		**0.371***
	(1.894)		(1.790)
Negative Weight Power		**0.423****	**0.366****
		(2.033)	(1.978)
Control Variables			
Size	**-0.008*****	**-0.005*****	**-0.006*****
	(-5.251)	(-5.000)	(-5.230)
Book to Market	**0.064*****	**0.040*****	**0.039*****
	(3.889)	(3.842)	(3.876)
Momentum	**-1.132*****	**-1.580*****	**-1.041*****
	(-4.160)	(-4.875)	(-4.135)
Volatility	**1.467**	**0.922**	**1.177**
	(1.134)	(1.102)	(1.139)
Turnover	**0.009***	**0.008***	**0.008***
	(1.794)	(1.699)	(1.777)
Accruals	**-0.651*****	**-0.571*****	**-0.552*****
	(-2.624)	(-2.680)	(-2.627)
Announcement Day Return	**0.813****	**0.941*****	**0.711*****
	(2.929)	(2.971)	(2.918)
Target Price Change	**0.153*****	**0.094****	**0.113*****
	(2.609)	(2.293)	(2.613)
Year Fixed Effects	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
# Observations (News Articles)	721	721	721
R^2	0.116	0.128	0.129
F	3.750	4.210	4.040

Chapter Five
General Conclusion and Further Research

The thesis presents discussions concerning firm characteristics of firms that announce changed/new strategies, short-term stock performance and effects of contents in FACTIVA news and analyst reports on stock price movement after the announcement date.

The main aim of Chapter Two is to explore firm characteristics of firms with strategy change announcements and the followed stock market reaction and long-term firm performance. First, my analysis shows that event firms have less competitive operating activities, higher financial distress risk, lower market expectations but higher growth prospects. Second, I find that event firms are associated with significantly positive stock performance around the announcement date. Third, event firms exhibit better operating performance, high long-term growth potential, improved liquidation and smaller financial distress risk at one accounting year after announcements. At the same time, they keep expanding their products and services from before to after the announcement date.

Chapter Three mainly investigates the impact of positive and negative words in the FACTIVA news reports of strategy change announcements on stock prices. Overall, my findings show that higher occurrence of influential positive (negative) words in FACTIVA news exhibit more positive (negative) stock reaction. Further, effects of positive (negative) words are stronger when announcements are more (less) informative. At the same time, increasing occurrence of positive (negative) words are associated with rising (dropping) abnormal returns over different time periods. In addition, I find that market participants have similar reaction to positive tones of

FACTIVA news relative to annual reports. Nevertheless, higher weights of negative words in annual reports have more negative abnormal returns.

Chapter Four also mainly explores the effects of positive and negative words on stock performance, but for analyst reports. This chapter first shows that, overall, higher weights of positive (negative) words in analyst reports are associated with more positive (negative) abnormal returns. Second, I find that higher occurrence of influential positive (negative) words leads to more positive (negative) stock returns when strategy change announcements are more (less) informative. Third, I show that increasing occurrence of positive words have no effect on abnormal returns over different time periods. Nevertheless, increasing weights of negative words exhibit decreasing stock performance. Fourth, increasing occurrence of influential positive and negative words are associated with higher trading volume while the effect is stronger for positive words relative to negative words. Finally, my analysis shows that positive and negative words in analyst reports have higher impacts on abnormal returns (i.e., more positive and more negative) relative to annual reports.

Further research may improve the analysis in several aspects. This thesis focuses on United States headquartered firms with strategy change announcements to enhance the comparisons concerning firms with similar business environments. First, one can conduct the future research on the European headquartered firms that have announced changed/new strategies. The purpose is to compare the effects of positive and negative words that are included in FACTIVA news, annual reports or analyst reports on the stock prices of firms headquartered in United States relative to European countries. Second, it may be valuable to further compare United States versus European headquartered firms that expand locally and internationally.

Third, this thesis also highlights differences in the market perceptions between positive versus negative tones. More specifically, it might be valuable to identify the positive and negative words that are associated with the largest possible market reactions. Finally, expansion is one of the most frequently used strategies and thus future research can investigate market response to the news of firms' expansion.

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